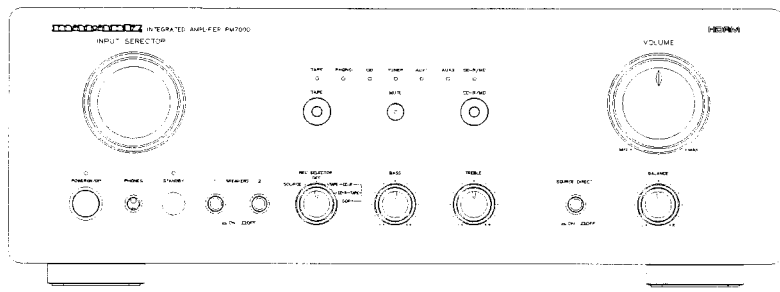
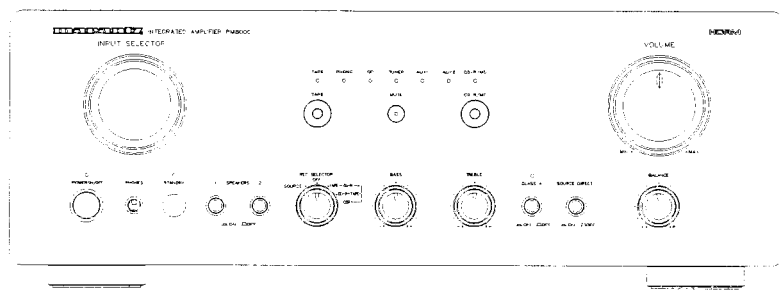
MARA-00704

Service Manual

PM7000 /N1B, /N1G, /U1B
PM8000 /N1B, /N1G, /F1B, /F1N
Integrated amplifier





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Please use this service manual with referring to the user guide (D.F.U) without fail.
修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行って下さい。

marantz®

- PM7000 / PM8000 -

276W855010 ACT
3120 785 22011
First Issue:1999.09

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

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Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

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440 MEDINAH ROAD
ROSELLE, ILLINOIS 60172
USA
PHONE : 630 - 307 - 3100
FAX : 630 - 307 - 2687

EUROPE / TRADING

MARANTZ EUROPE B.V.
P.O.BOX 80002, BUILDING SFF2
5600 JB EINDHOVEN
THE NETHERLANDS
PHONE : +31 - 40 - 2732241
FAX : +31 - 40 - 2735578

BRAZIL

MARANTZ BRAZIL
CAIXA POSTAL 21462
CEP 04698-970
SAO PAULO, SP, BRAZIL
PHONE : 0800 - 123123(Discagem Direta Gratuita)
FAX : +55 11 534. 8988

PROFESSIONAL **AMERICAS**

SUPERSCOPE TECHNOLOGIES, INC.
MARANTZ PROFESSIONAL PRODUCTS
2640 WHITE OAK CIRCLE, SUITE A
AURORA, ILLINOIS 60504 USA
PHONE : 630 - 820 - 4800
FAX : 630 - 820 - 8103

CANADA

LENBROOK INDUSTRIES LIMITED
633 GRANITE COURT,
PICKERING, ONTARIO L1W 3K1
CANADA
PHONE : 905 - 831 - 6333
FAX : 905 - 831 - 6936

AUSTRALIA

JAMO AUSTRALIA PTY LTD
1 EXPO COURT, P.O. BOX 350
MT. WAVERLEY VIC 3149
AUSTRALIA
PHONE : +61 - 3 - 9543 - 1522
FAX : +61 - 3 - 9543 - 3677

THAILAND

MRZ STANDARD CO.,LTD
746 - 754 MAHACHAI ROAD.,
WANGBURAPAPIROM, PHRANAKORN,
BANGKOK, 10200 THAILAND
PHONE : +66 - 2 - 222 9181
FAX : +66 - 2 - 224 6795

SINGAPORE

WO KEE HONG (S) PTE LTD
WO KEE HONG CENTRE
NO.23, LORONG 8, TOA PAYOH
SINGAPORE 319257
PHONE : +65 2544555
FAX : +65 2502213

TAIWAN

PAI- YUING CO., LTD.
6 TH FL NO, 148 SUNG KIANG ROAD,
TAIPEI, 10429, TAIWAN R.O.C.
PHONE : +886 - 2 - 25221304
FAX : +886 - 2 - 25630415

MALAYSIA

WO KEE HONG ELECTRONICS SDN. BHD.
SUITE 8.1, LEVEL 8, MENARA GENESIS,
NO. 33, JALAN SULTAN ISMAIL,
50250 KUALA LUMPUR, MALAYSIA
PHONE : +60 3 - 2457677
FAX : +60 3 - 2458180

JAPAN *Technical*

MARANTZ JAPAN, INC.
35- 1, 7- CHOME, SAGAMIONO
SAGAMIHARA - SHI, KANAGAWA
JAPAN 228-8505
PHONE : +81 42 748 1013
FAX : +81 42 741 9190

日本マランツ株式会社

本 社 〒228-8505
神奈川県相模原市相模大野7-35-1
営業本部 〒150-0022
東京都渋谷区恵比寿南1-11-9

KOREA

MK ENTERPRISES LTD.
ROOM 604/605, ELECTRO-OFFICETEL, 16-58,
3GA, HANGANG-RO, YONGSAN-KU, SEOUL
KOREA
PHONE : +822 - 3232 - 155
FAX : +822 - 3232 - 154

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 1492.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

1. SPECIFICATIONS

Power output (class AB operation)

RMS 8ohms (20 Hz - 20 kHz) 95W
DIN 8 ohms 105W
THD at 8 ohms RMS rated output 0.03%
Damping factor 150

Power out put (PM8000 classA operation)

RMS 8 ohms (20 Hz - 20 kHz) ..... 25 W
DIN 8 ohms ..... 28 W
THD at 8 ohms RMS. rated output 0.03%
Damping factor 130

IHF dynamic power (class AB operation)

8 ohms ..... 120 W

IHF dynamic power (PM8000 class A operation)

8 ohms ..... 35 W

Magnetic cartridge input (MM)

input sensitivity impedance ..... 2.5 mV/47 kOhms
Accuracy of frequency response to IEC RIAA ..... 0.5 dB
Signal to noise ratio ..... 85 dB

Tuner/CD/Aux/Tape inputs

input sensitivity impedance ..... 150 mV/40 kOhms
Signal to noise ratio 109dB
Frequency response
(-1 dB limits, Source Direct) ..... 10 Hz - 50 kHz
Tone characteristic (100 Hz and 10 kHz) ..... ±8 dB
Channel separation
(1 kHz/10 kHz, Source direct) ..... >80 / >70 dB

General

Power Requirements

/N versions ..... 230 V AC,50 Hz
/U versions ..... 120 V AC,60 Hz

Dimensions

Width ..... 440 mm
Height ..... 159 mm
Depth ..... 370.5 mm

Weight

Unit alone ..... 12.3 kg

Specifications subject to change without prior notice

定格出力(20 Hz - 20 kHz 両チャンネル同時駆動)
クラスAB ..... 95 W x 2 (8 Ω 負荷)
クラスA ..... 25 W x 2 (8 Ω 負荷)
全高周波歪率(20 Hz - 20 kHz, 10 W出力時8 Ω負荷)
クラスAB 0.015%
クラスA 0.010%
混変調歪率 (SMPTE) 0.015%
出力帯域幅 (8Ω負荷,0.08%歪率) ..... 10 Hz - 80 kHz
周波数特性
(CD,ソースダイレクト) ..... 10 Hz - 50 kHz +0 dB -1 dB
ダンピングファクター (8 Ω負荷,100 Hz - 10 kHz) 130
入力感度／入力インピーダンス
PHONO (MM) ..... 2.5 mV/47 kΩ
HIGH LEVEL ..... 150 mV/40 kΩ
PHONO最大許容入力 (1 kHz)
(MM) ..... 150 mV
RIAA偏差 (20 Hz) ..... -2 dB
(40 Hz - 20 kHz) ..... ±0.5 dB
S/N比 (IHF,Aネットワーク,入力ショート)
PHONO (MM) ..... 85 dB
HIGH LEVEL ..... 109 dB
トーンコントロール
BASS (100 Hz) ..... ±8 dB
TREBLE (10 kHz) ..... ±8 dB
電源電圧 ..... AC 100 V, 50 Hz/60 Hz
消費電力 (電気用品取締法) ..... 160 W
最大外形寸法
幅 ..... 440 mm
高さ ..... 159 mm
奥行き ..... 370.5 mm
質量 ..... 12.3 kg
付属品
リモートコントロール送信機(RC8000PM) 1台

本機の規格および外観は改良のため予告なく変更することがあります。

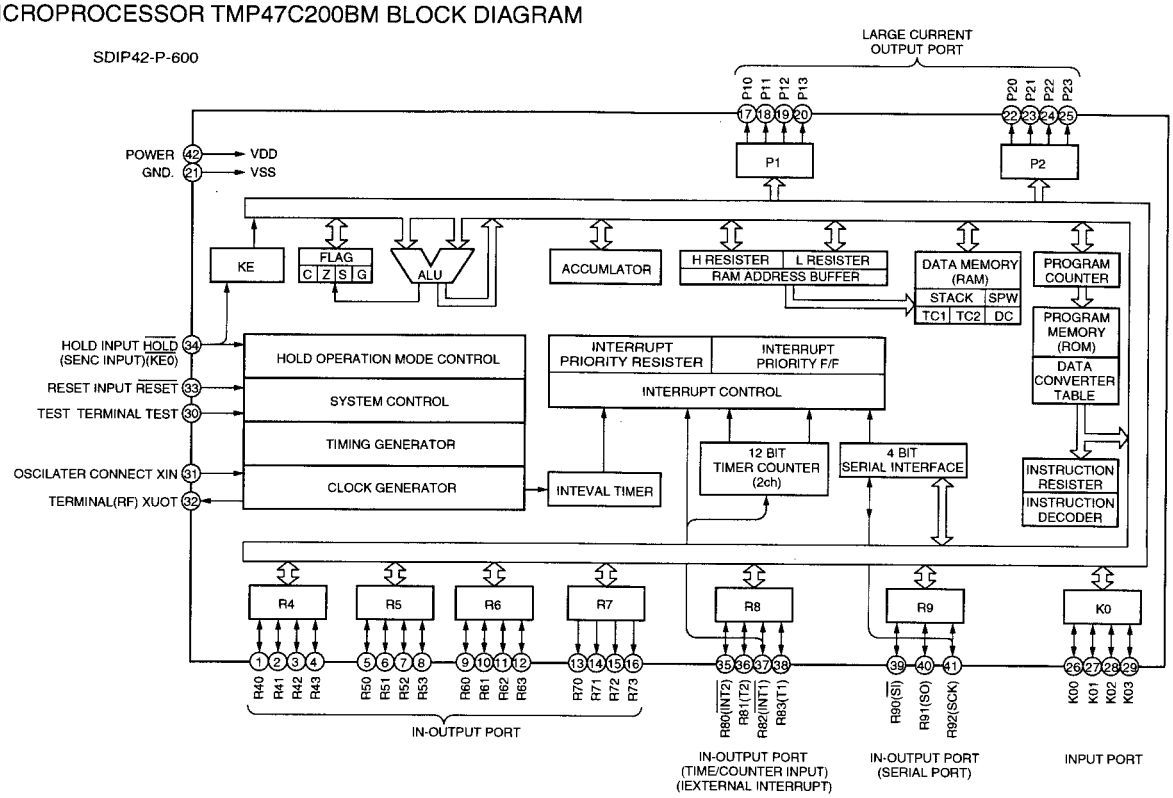
2.TEST EQUIPMENT REQUIRED FOR SERVICING

Item	Use
Distortion Analyzer	Distortion measurements
Audio Oscillator	Sinewave and squarewave signal source
AC VTVM	Voltage measurements (AC)
Oscilloscope	Waveform analysis and trouble shooting and ASO alignment
DC VTVM	Voltage measurements (DC)
AC Wattmeter	Monitors primary power to amplifier
Line Voltmeter	Monitors of primary voltage to amplifier
Variable Autotransformer	Adjust level of primary voltage to amplifier
Circuit Tester	Trouble shooting
Shortting Plug	Shorts amplifier input to eliminate noise pickup

項　目	使　用　方　法
歪　率　計	歪の測定
低周波発振器	正弦波および矩型波の信号源
ＡＣ　ＶＴＶＭ	交流電圧の測定
オシロスコープ	波計分析、トラブルシューティングおよびASOの調整
ＤＣ　ＶＴＶＭ	直流電圧の測定
交流ワットメーター	アンプの一次側消費電力のモニター
電源電圧計	アンプの一次側電圧のモニター
スライダック	アンプの一次側電圧の調整
テスター	トラブルシューティング
ショート用プラグ	雑音を拾わないようにアンプ入力を短絡する

3. IC INFORMATIONS

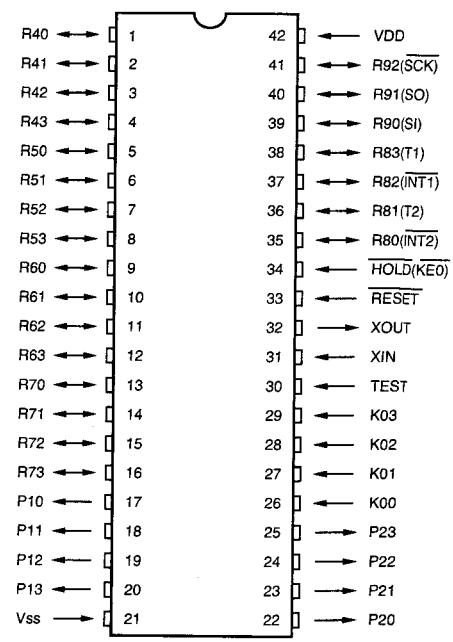
MICROPROCESSOR TMP47C200BM BLOCK DIAGRAM



PIN no.	PORT NAME		ACT	FUNCTION
1	R40	MMUT	H	MANUAL MUTE SIGNAL MUTE
2	R41	FMUT	L	SIGNAL(SOURCE/MONITOR SWITCH)
3	R42	VOUP	L	MOTOR DRIVE VOLUME UP
4	R43	VODW	L	MOTOR DRIVE VOLUME DOWN
5	R50	T3K	L	MONITOR INPUT SWITCH (TAPE3)
6	R51	T2K	L	MONITOR INPUT SWITCH (TAPE2)
7	R52	T1K	L	MONITOR INPUT SWITCH (TAPE1)
8	R53	AX2K	L	SOURCE INPUT SWITCH (AUX2)
9	R60	AX1K	L	SOURCE INPUT SWITCH (AUX1)
10	R61	TUNK	L	SOURCE INPUT SWITCH (TUNER)
11	R62	CDK	L	SOURCE INPUT SWITCH (CD)
12	R63	PHOK	L	SOURCE INPUT SWITCH (PHONO)
13	R70	LSTB	L	LED INDICATOR STAND BY DISPLAY
14	R71	LMUT	L	LED INDICATOR MUTE DISPLAY
15	R72	LPRO	L	LED INDICATOR PROCESSOR DISPLAY
16	R73	LTP3	L	LED INDICATOR TAPE3 DISPLAY
17	P10	LTP2	L	LED INDICATOR TAPE2 DISPLAY
18	P11	LTP1	L	LED INDICATOR TAPE1 DISPLAY
19	P12	LSOU	L	LED INDICATOR SOURCE DISPLAY
20	P13	LAX2	L	LED INDICATOR AUX2 DISPLAY
21	VSS			GND.
22	P20	LAX1	L	LED INDICATOR AUX1 DISPLAY
23	P21	LTUN	L	LED INDICATOR TUNER DISPLAY
24	P22	LECD	L	LED INDICATOR CD DISPLAY
25	P23	LPHO	L	LED INDICATOR PHONO DISPLAY
26	K00	1RS	L	SOURCE INPUT SWITCH(ROTARY ENCODER) bit1
27	K01	2RS	L	SOURCE INPUT SWITCH(ROTARY ENCODER) bit2
28	K02	PRK	L	PROCESSOR IN-OUT SWITCH
29	K03	MUK	L	MANUAL MUTE
30	TEST			NOT USED (GND)
31	XIN			CLOCK 4.00 MHz (IN)
32	XOUT			CLOCK 4.00 MHz (OUT)
33	RESET	RES	L	SYSTEM RESET
34	HOLD	PDW	L	POWER DOWN CHECK
35	R80	RXRC	L	REMOTE CONTROL INPUT (RC-5)
36	R81	EN1		MODEL SELECT 1
37	R82	EN2		MODEL SELECT 2
38	R83	EN3		MODEL SELECT 3
39	R90	TXRC	L	SERIAL DATA(RC-5 REMOTE CONTROL)
40	R91	ENTX	L	ENABLE (REMOTE CONTROL)
41	R92	RELY	L	STAND-BY RELAY CONTROL
42	VDD			POWER SUPPLY

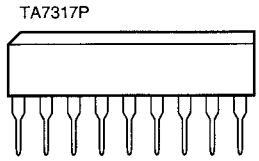
MICROPROCESSOR TMP47C200BM
Position NO.7401

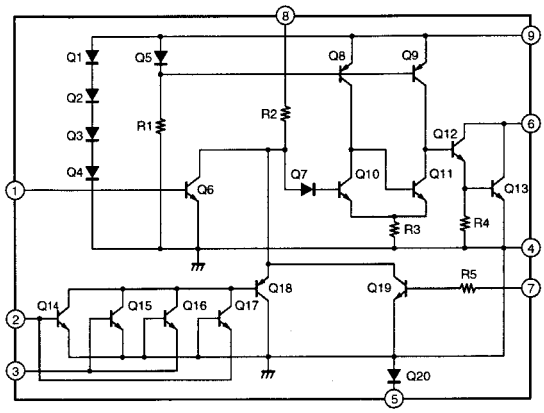
SDIP42-P-600

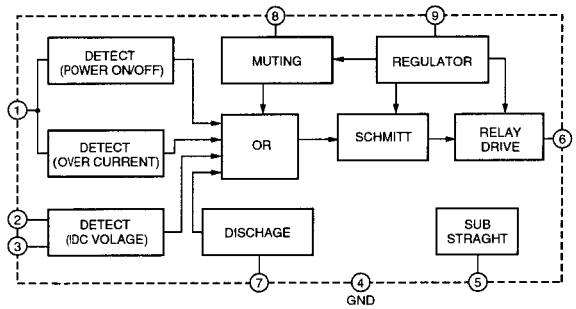


TA7317P (Position NO.7290)

TA7317P

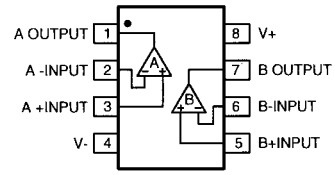




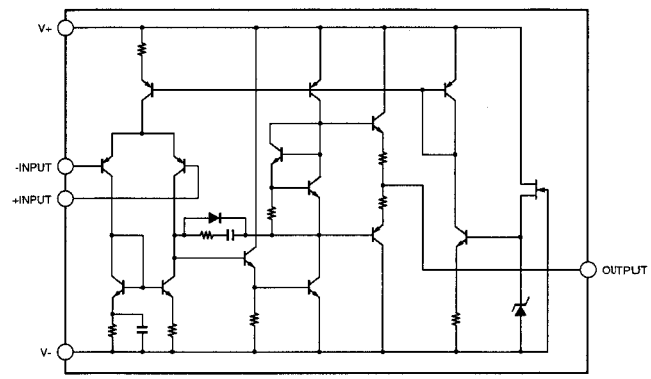


NJM2068 (Position NO.7501,7502,7503)

NJM2068

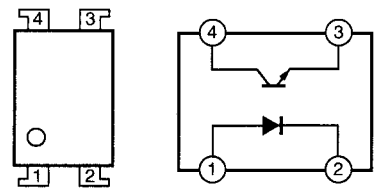


NJM2068



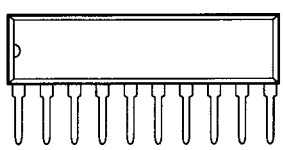
PC817 (Position NO.7269,7270)

PC817



LB1641(Position NO.7402)

LB1641



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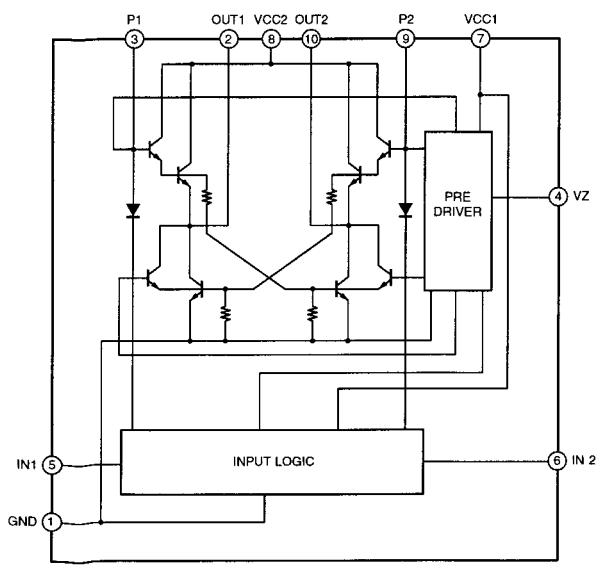
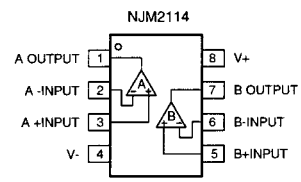
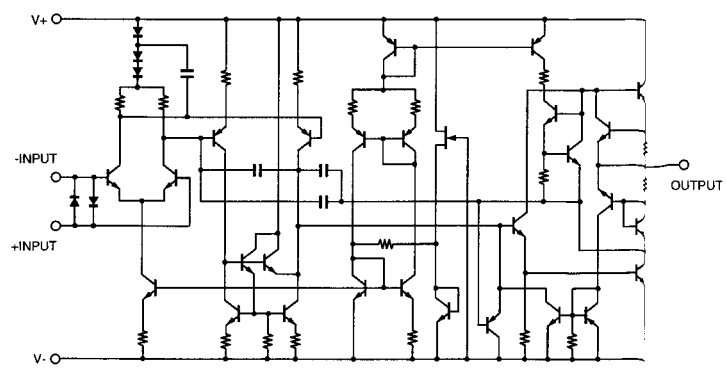


NJM2114(Position NO.7555,7655)

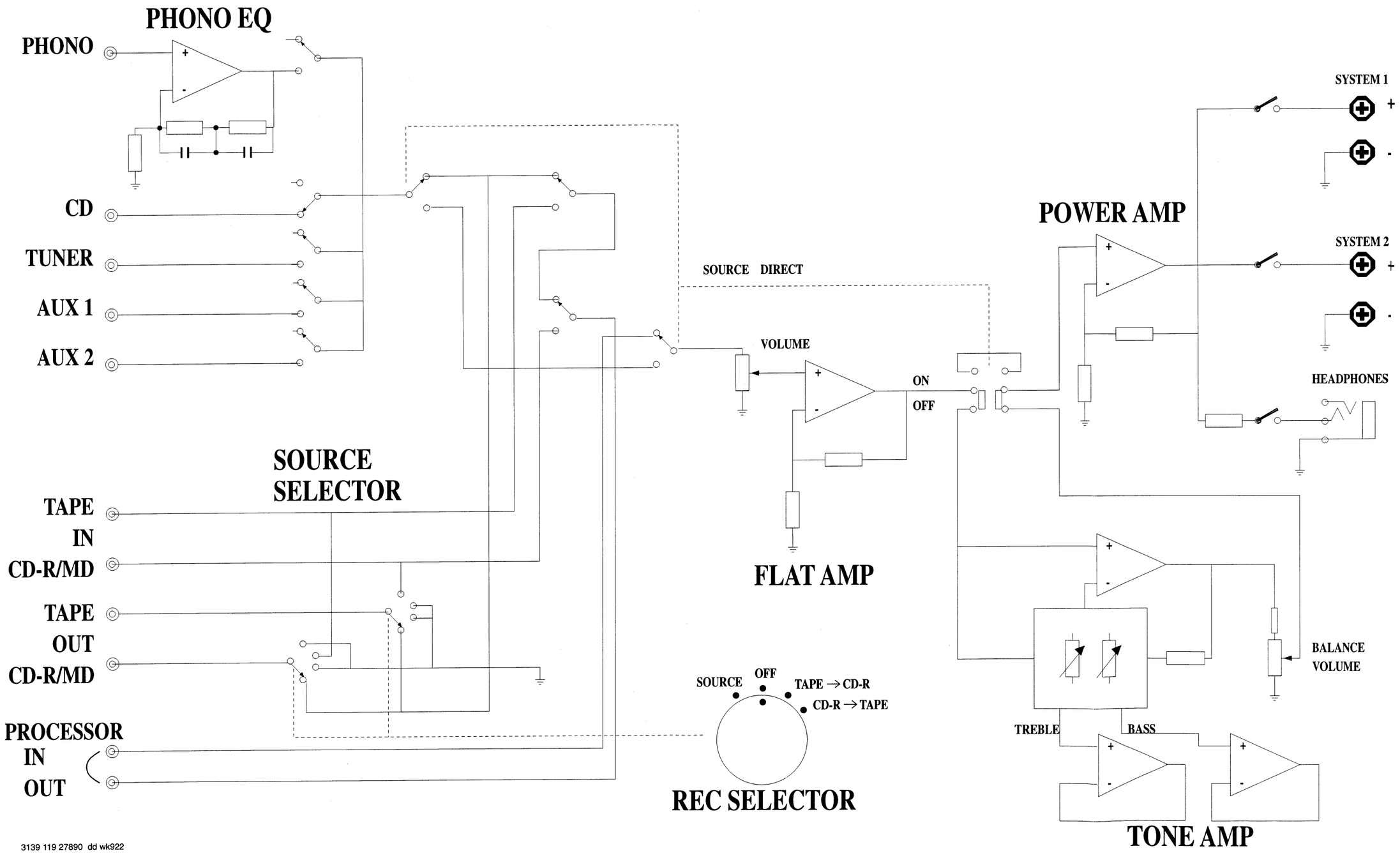
NJM2114



NJM2114

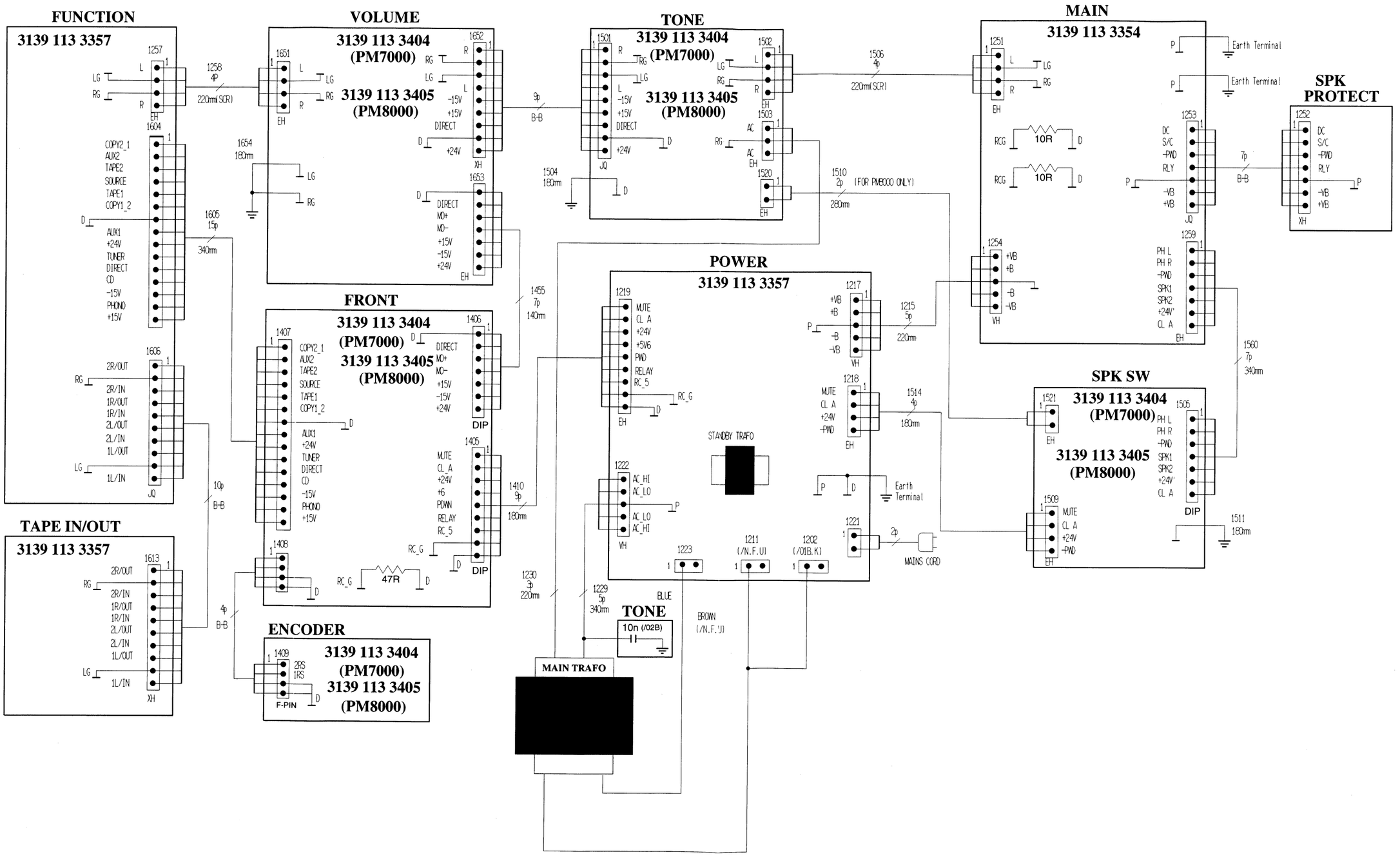


4. BLOCK DIAGRAM



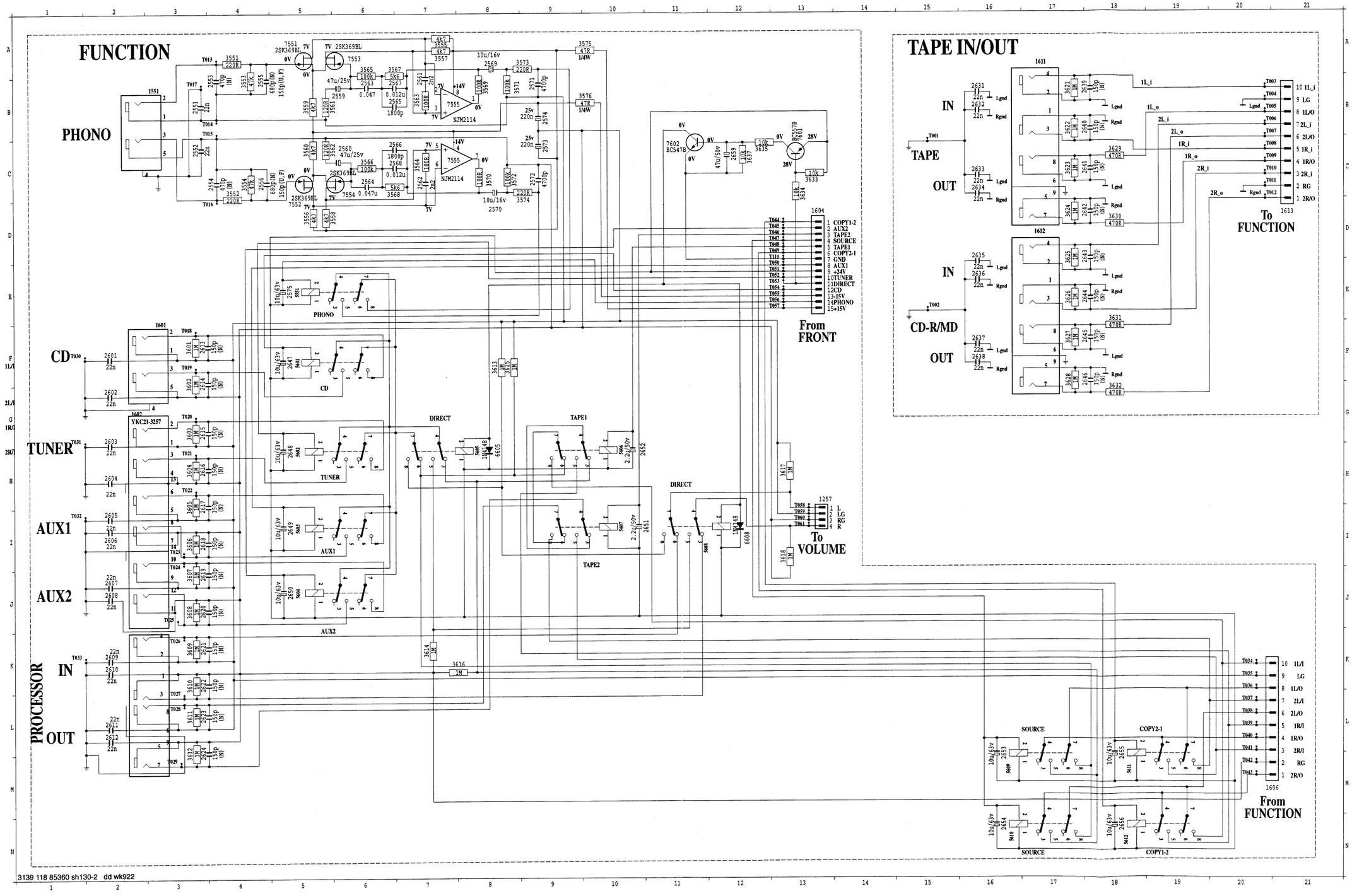
3139 119 27890 dd wk922

5. WIRING DIAGRAM



6. SCHEMATIC DIAGRAM AND PARTS LOCATION (PARTS SIDE)

FUNCTION & TAPE IN/OUT CIRCUIT



1257 H13
1551 B 3
1601 F 3
1602 G 3
1604 D13
1606 M20
1611 A17
1612 D17
1613 D21
2551 B 4
2552 C 4
2553 A 4
2554 C 4
2555 A 5
2556 C 5
2557 A 5
2558 C 5
2559 B 6
2560 C 6
2561 B 7
2562 C 7
2563 A 6
2564 C 6
2565 B 7
2566 C 7
2567 B 7
2568 C 7
2569 A 8
2570 D 8
2571 B 9
2572 C 9
2573 C 9
2574 B 9
2575 B 5
2601 F 2
2602 G 2
2603 G 2
2604 H 2
2605 I 2
2606 I 2
2607 J 2
2608 J 2
2609 K 2
2610 K 2
2611 L 2
2612 L 2
2613 F 3
2614 F 3
2615 G 3
2616 H 3
2617 I 3
2618 I 3
2619 J 3
2620 J 3
2621 K 3
2622 K 3
2623 L 3
2624 L 3
2631 B16
2632 B16
2633 C16
2634 C16
2635 D16
2636 E16
2637 F16
2638 F16
2639 B18
2640 B18
2641 C18
2642 D18
2643 D18
2644 E18
2645 F18
2646 F18
2647 F 5
2648 H 5
2649 I 5
2650 I 5
2651 I11
2652 H10
2653 M16
2654 M16
2655 M18
2656 M18
2659 C12
3551 A 4
3552 C 4
3553 A 4
3554 C 4
3555 A 4
3556 D 5
3557 A 5
3558 B 5
3559 B 5
3560 C 5
3561 B 6
3562 C 6
3563 B 7
3564 C 7
3565 A 6
3566 C 6
3567 A 7
3568 C 6
3569 B 8
3570 C 8
3571 B 8
3572 C 8
3573 A 9
3574 D 9
3575 A10
3576 B10
3601 F 3
3602 F 3
3603 G 3
3604 H 3
3605 H 3
3606 I 3
3607 J 3
3608 J 3
3609 K 3
3610 K 3
3611 L 3
3612 L 3
3613 F 8
3614 K 7
3615 F 8
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3617 H13
3618 I13
3621 B17
3622 B17
3623 C17
3624 D17
3625 D17
3626 B17
3627 F17
3628 F17
3629 C18
3630 D18
3631 B18
3632 G18
3633 C13
3634 C13
3635 C12
3637 C12
5551 E 5
5601 F 5
5602 H 5
5603 I 5
5604 J 5
5605 H 8
5606 H10
5607 I10
5608 I11
5609 M16
5610 M16
5611 M18
5612 N18
6605 H 8
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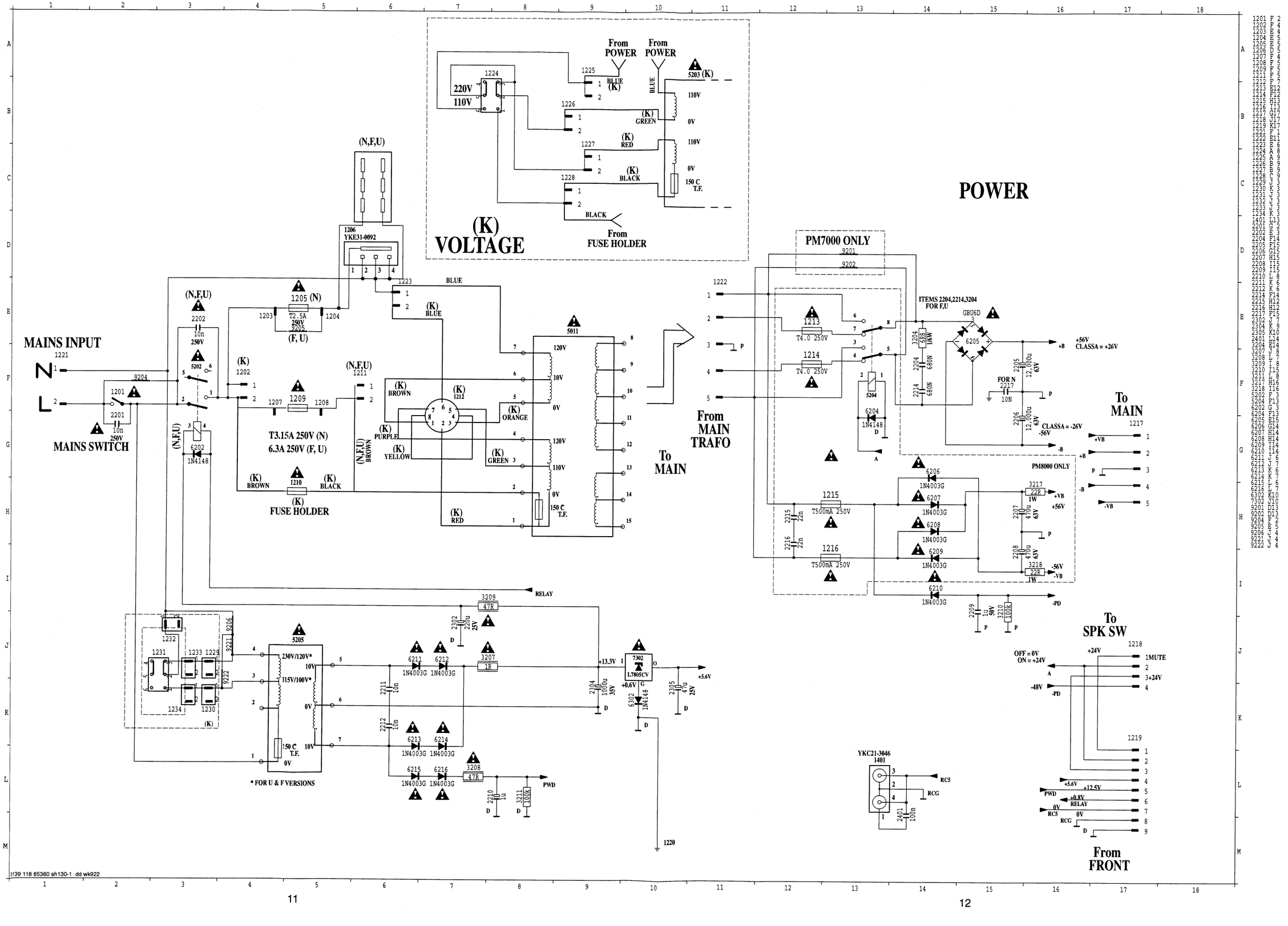
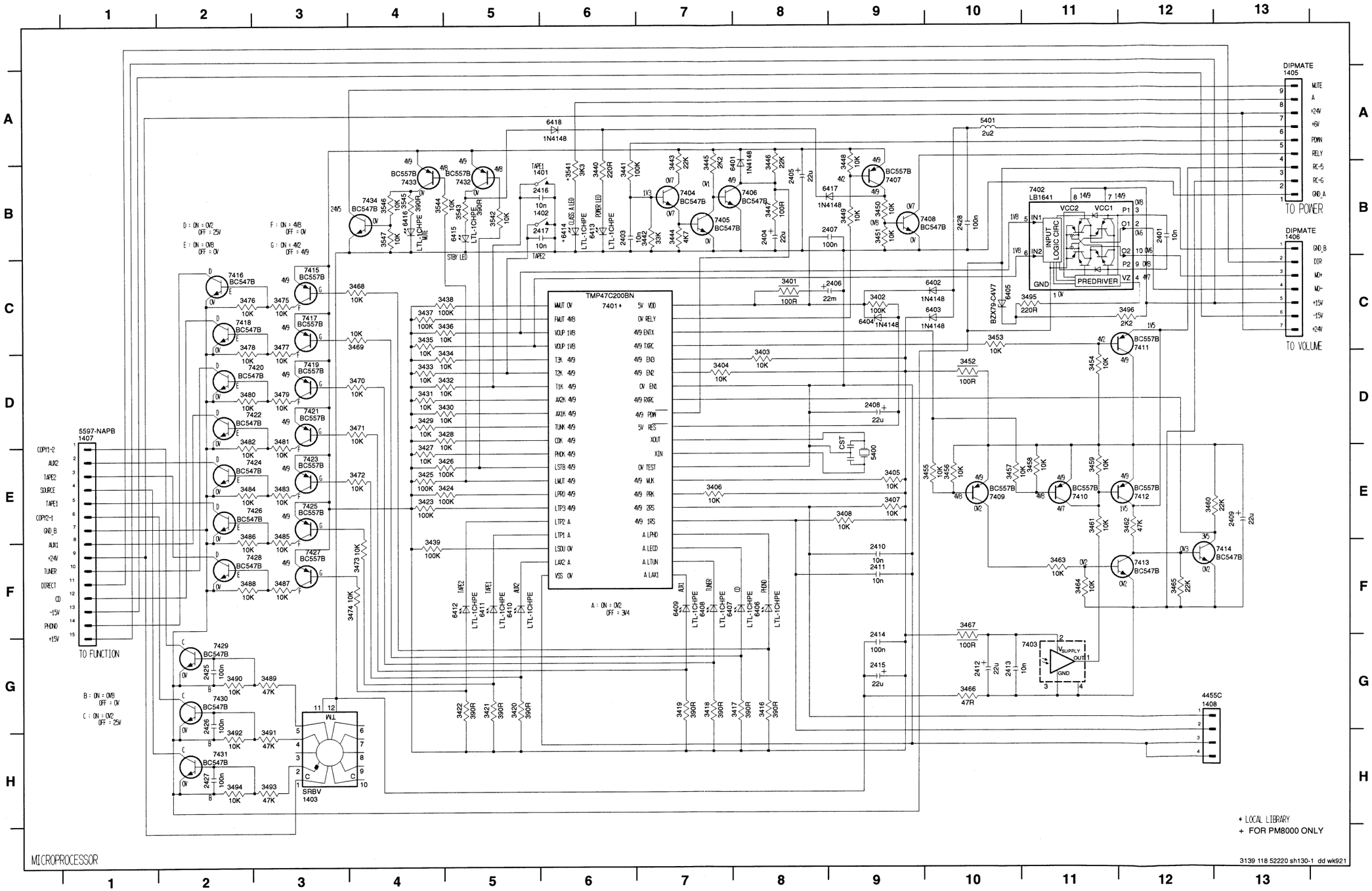
7551 A 4
7552 C 4
7553 A 4
7554 C 4
7555 B 7
7601 C11
7602 C11

POWER CIRCUIT



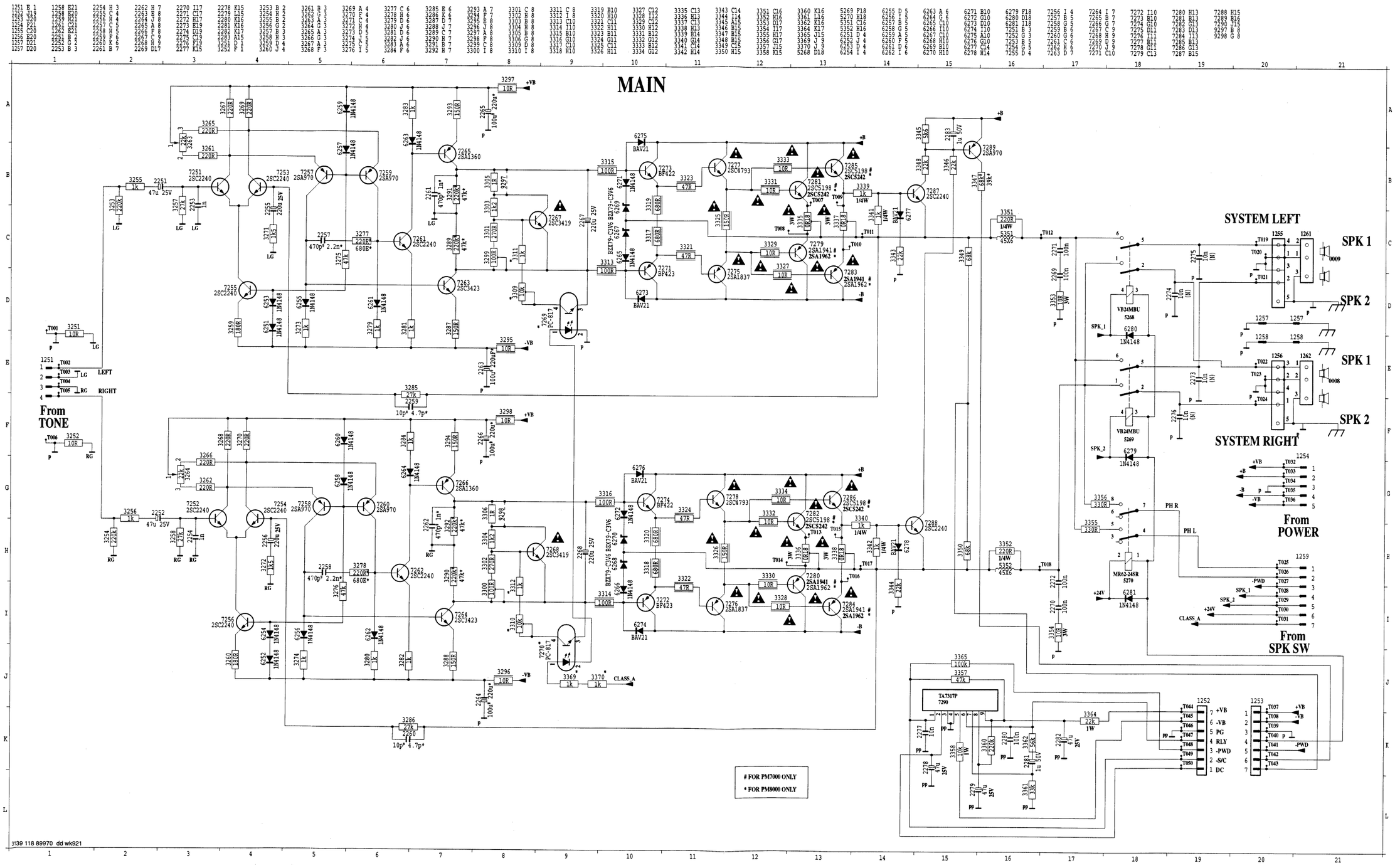
1201 P 2
1202 P 4
1203 P 4
1204 P 5
1205 P 5
1206 P 5
1207 P 4
1208 P 5
1209 P 5
1211 P 5
1212 P 7
1213 P12
1214 P12
1215 H13
1216 J12
1217 Q17
1218 J17
1219 K17
1221 F 1
1222 P11
1223 P 6
1224 A 8
1225 A 9
1226 B 9
1227 B 9
1228 C 9
1229 J 3
1230 K 3
1231 J 3
1232 J 3
1233 J 3
1234 K 3
1401 L13
2201 G 2
2202 E 3
2204 F14
2205 F15
2206 G15
2207 H15
2208 I15
2209 I15
2210 L 8
2211 K 6
2212 K 6
2214 F14
2215 H12
2216 H12
2227 P15
2302 J 7
2304 K 9
2305 K10
2401 L14
3204 E14
3207 J 8
3208 L 7
3209 I 8
3210 L 8
3211 L 8
3217 H16
3218 I16
5202 F 3
5204 I13
6202 G 3
6204 F13
6205 E15
6206 H14
6207 H14
6208 H14
6209 I14
6210 I14
6211 J 6
6212 J 7
6213 K 6
6214 K 7
6215 L 6
6216 L 7
6302 K10
7302 J10
9201 D13
9202 D13
9204 F 2
9205 B 5
9206 J 4
9221 J 4
9222 J 4

FRONT CIRCUIT

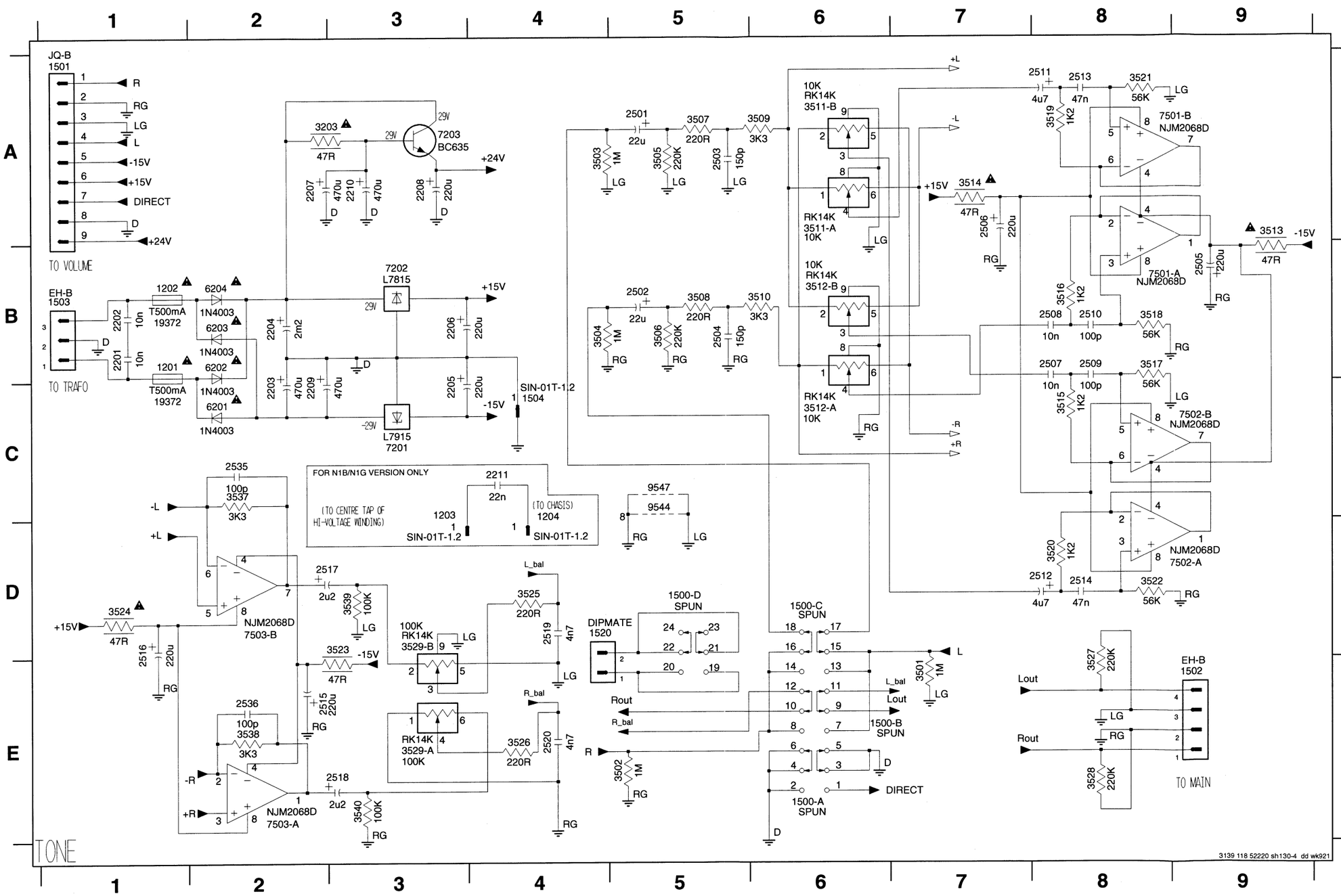


1401 B6	3487 F3	
1402 B6	3488 F2	
1403 H3	3489 G3	
1405 A13	3490 G2	
1406 B13	3491 H3	
1407 D1	3492 H2	
1408 G12	3493 H3	
2401 B12	3494 H2	
2403 B6	3495 C11	
2404 B8	3496 C12	
2405 B8	3541 B6	
2406 C9	3542 B5	
2407 B9	3543 B5	
2408 D9	3544 B4	
2409 E13	3545 B4	
2410 F9	3546 B4	
2411 F9	3547 B4	
2412 G10	5400 E9	
2413 G10	5401 A10	
2414 G9	6401 B8	
2415 G9	6402 C10	
2416 B6	6403 C10	
2417 B6	6404 C9	
2425 G2	6405 C10	
2426 G2	6406 F8	
2427 H2	6407 F7	
2428 B10	6408 F7	
3401 C8	6409 F7	
3402 C9	6410 F5	
3403 D8	6411 F5	
3404 D7	6412 F5	
3405 E9	6413 B6	
3406 E7	6414 B6	
3407 E9	6415 B5	
3408 E9	6416 B4	
3416 G8	6417 B9	
3417 G8	6418 A6	
3418 G7	7401 C6	
3419 G7	7402 B11	
3420 G5	7403 G11	
3421 G5	7404 B7	
3422 G5	7405 B7	
3423 E4	7406 B8	
3424 E5	7407 B9	
3425 E5	7408 B9	
3426 E5	7409 E10	
3427 E4	7410 E11	
3428 D5	7411 C12	
3429 D4	7412 E12	
3430 D5	7413 F12	
3431 D4	7414 F13	
3432 D5	7415 C3	
3433 D4	7416 C2	
3434 D5	7417 C3	
3435 C4	7418 C2	
3436 C5	7419 D3	
3437 C4	7420 D3	
3438 C5	7421 D3	
3439 F4	7422 D3	
3440 B6	7423 E3	
3441 B6	7424 E3	
3442 B7	7425 E3	
3443 B7	7426 E3	
3444 B7	7427 F3	
3445 B7	7428 F3	
3446 B8	7429 G2	
3447 B8	7430 G2	
3448 B9	7431 H2	
3449 B9	7432 B5	
3450 B9	7433 B4	
3451 B9	7434 B4	
3452 D10		
3453 C10		
3454 D11		
3455 E10		
3456 E10		
3457 E10		
3458 E11		
3459 E11		
3460 E12		
3461 E11		
3462 E12		
3463 F11		
3464 F11		
3465 F12		
3466 G10		
3467 F10		
3468 C4		
3469 C4		
3470 D4		
3471 D4		
3472 E4		
3473 F4		
3474 F3		
3475 C3		
3476 C2		
3477 C3		
3478 C2		
3479 D3		
3480 D2		
3481 D3		
3482 D2		
3483 E3		
3484 E2		
3485 E3		
3486 E2		

MAIN CIRCUIT



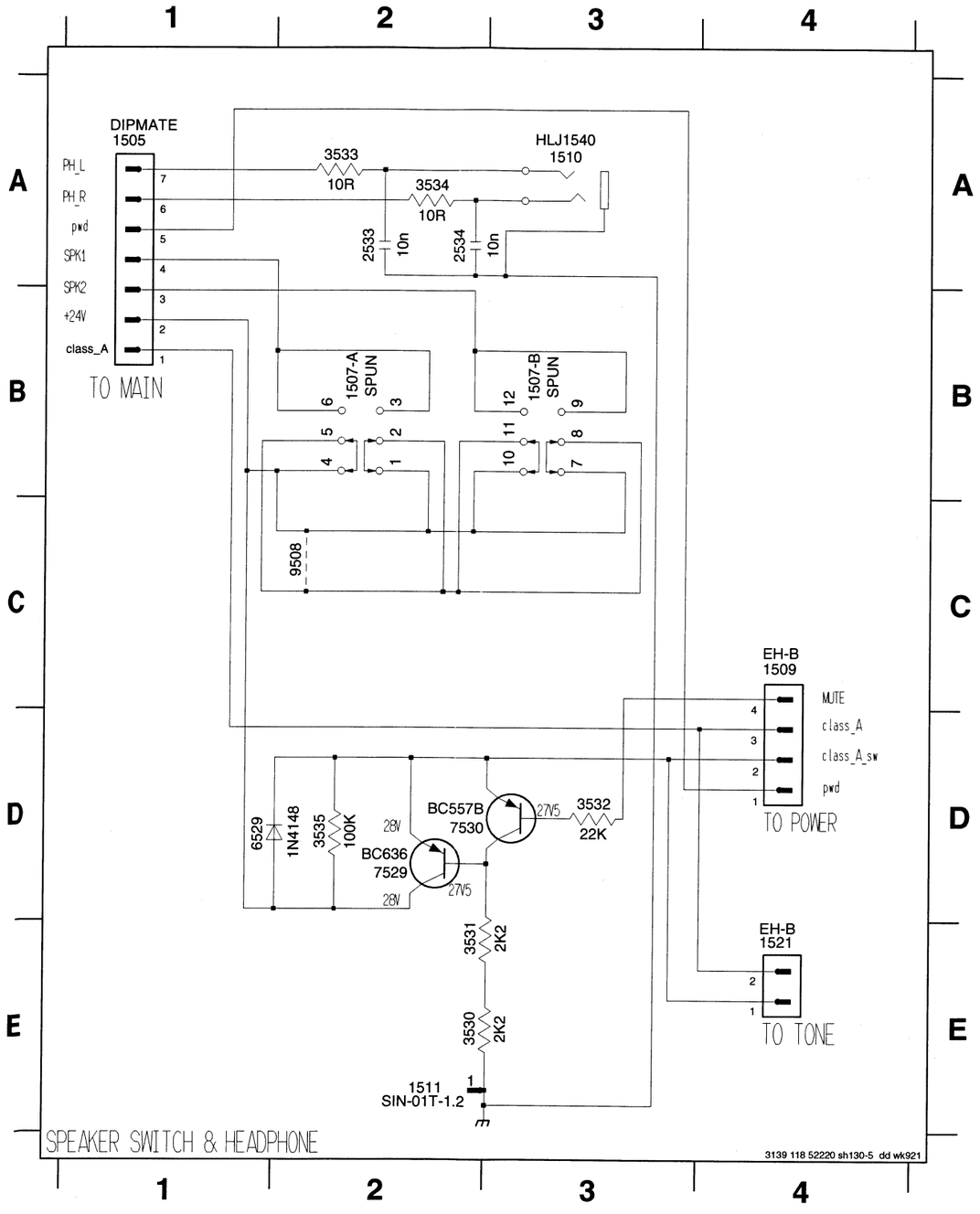
TONE CIRCUIT



1201 B1
1202 B1
1203 C3
1204 C4
1500-A E6
1500-B E7
1500-C D6
1500-D D5
1501 A1
1502 E9
1503 B1
1504 C4
1520 D5
2201 B1
2202 B1
2203 C2
2204 B2
2205 C3
2206 B3
2207 A2
2208 A3
2209 C2
2210 A3
2211 C4
2501 A5
2502 B5
2503 A5
2504 B5
2505 B9
2506 A7
2507 B8
2508 B8
2509 B8
2510 B8
2511 A8
2512 D8
2513 A8
2514 D8
2515 E2
2516 D1
2517 D2
2518 E3
2519 D4
2520 E4
2535 C2
2536 E2
3203 A2
3501 E7
3502 E5
3503 A4
3504 B4
3505 A5
3506 B5
3507 A5
3508 B5
3509 A6
3510 B6
3511-A A6
3511-B A6
3512-A C6
3512-B B6
3513 A9
3514 A7
3515 C8
3516 B8
3517 B8
3518 B8
3519 A8
3520 D8
3521 A8
3522 D8
3523 D3
3524 D1
3525 D4
3526 E4
3527 E8
3528 E8
3529-A E3
3529-B D3
3537 C2
3538 E2
3539 D3
3540 E3
6201 C2
6202 B2
6203 B2
6204 B2
7201 C3
7202 B3
7203 A3
7501-A B8
7501-B A8
7502-A D8
7502-B C9
7503-A E2
7503-B D2
9544 C5
9547 C5

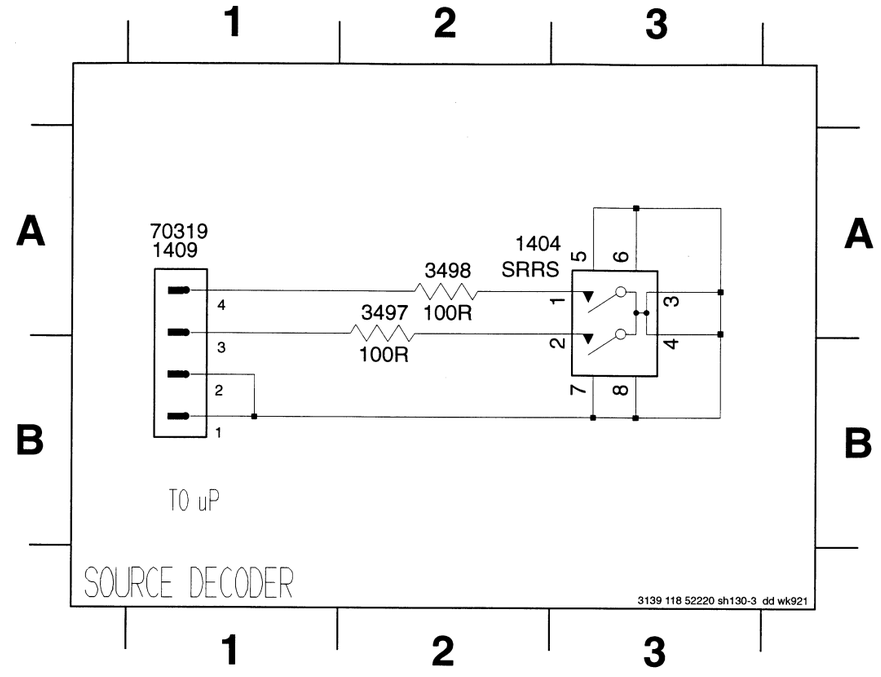
SPK SW CIRCUIT

1505 A1 1509 C4 1521 E4 3530 E2 3533 A2 6529 D1 9508 C2
1507-A B2 1510 A3 2533 A2 3531 E2 3534 A2 7529 D2
1507-B B3 1511 E2 2534 A2 3532 D3 3535 D2 7530 D2



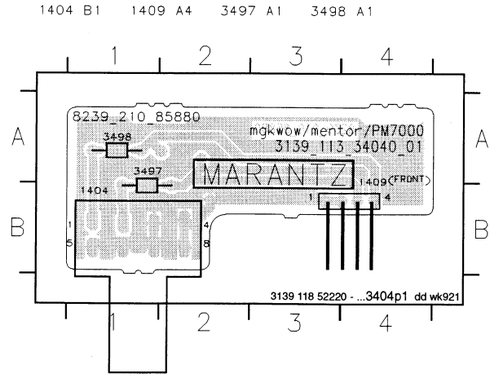
ENCODER CIRCUIT

1404 A3
1409 A1
3497 A2
3498 A2



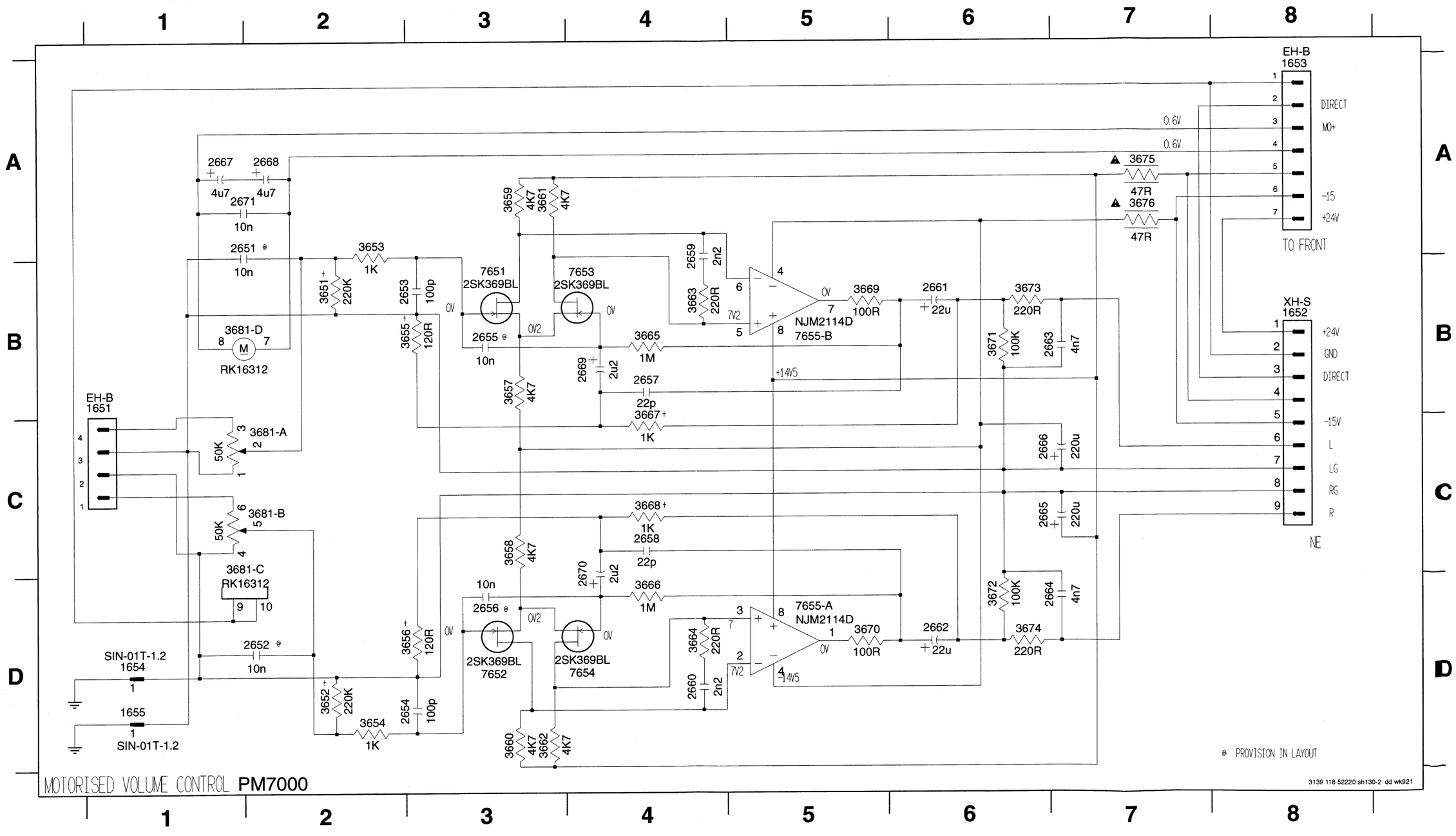
ENCODER BOARD

1404 B1 1409 A4 3497 A1 3498 A1

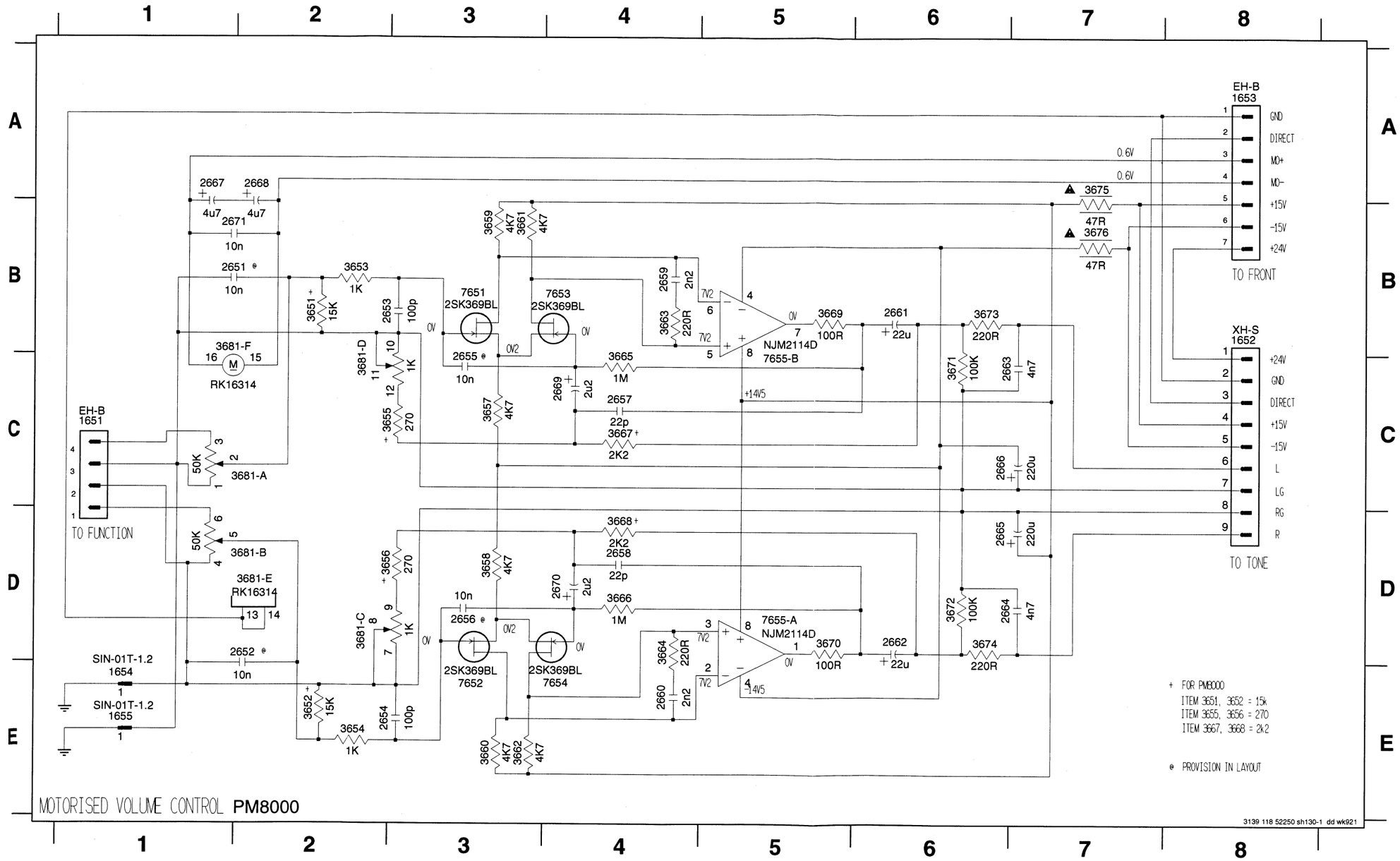


VOLUME CONTROL CIRCUIT (PM7000)

1651 B1	1655 D1	2654 D3	2658 C4	2662 D6	2666 C6	2670 C4	3653 A2	3657 B3	3661 A3	3665 B4	3669 B5	3673 B6	3681-A C2	7651 B3	7655-A D5
1652 B8	2651 A1	2655 B3	2659 A4	2663 B7	2667 A1	2671 A1	3654 D2	3658 C3	3662 D3	3666 D4	3670 D5	3674 D6	3681-B C2	7652 D3	7655-B B5
1653 A8	2652 D2	2656 D3	2660 D4	2664 D7	2668 A2	3651 B2	3655 B3	3659 A3	3663 B4	3667 C4	3671 B6	3675 A7	3681-C C2	7653 B4	
1654 D1	2653 B3	2657 B4	2661 B6	2665 C6	2669 B4	3652 D2	3656 D3	3660 D3	3664 D4	3668 C4	3672 D6	3676 A7	3681-D B1	7654 D4	

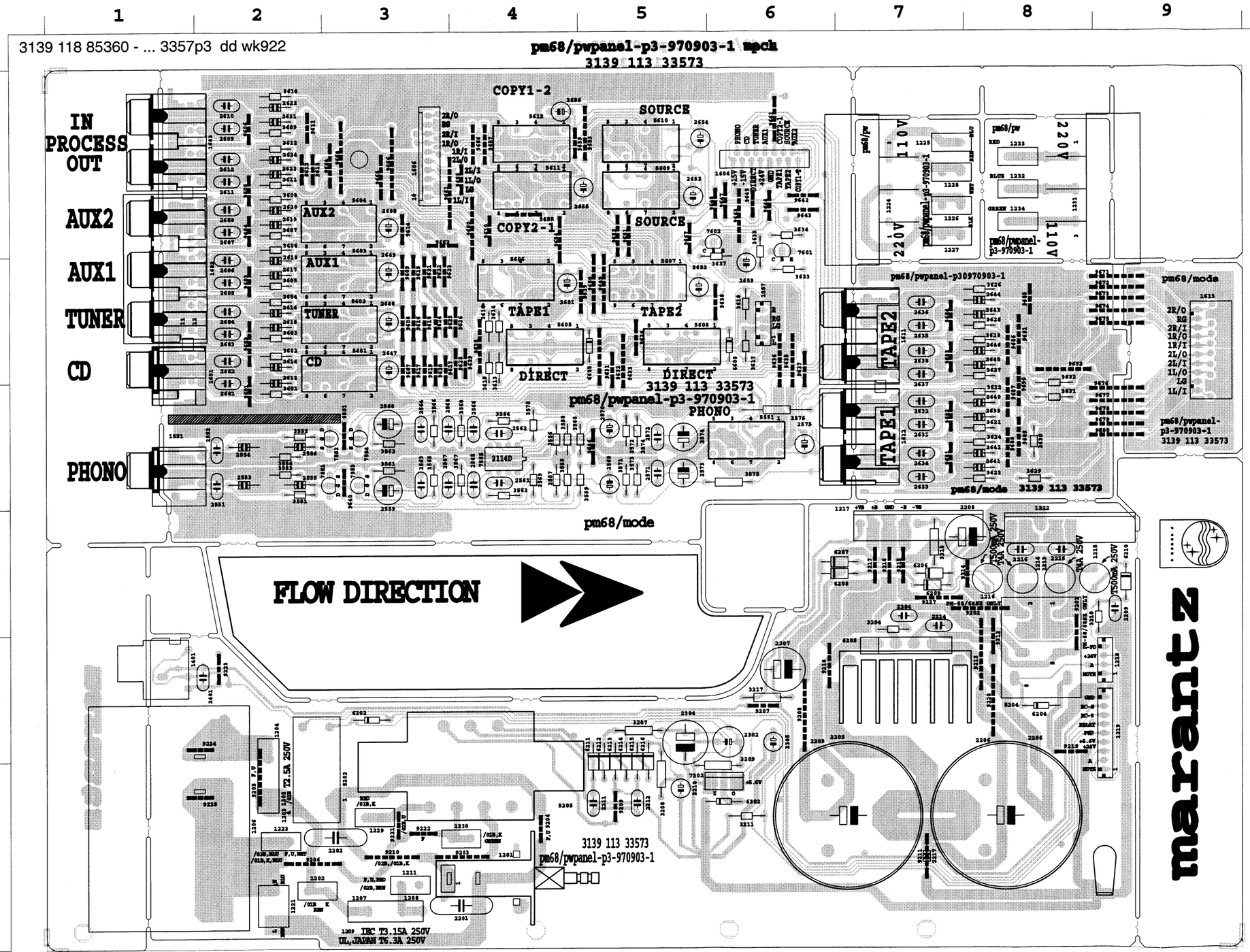


VOLUME CONTROL CIRCUIT (PM8000)



1651 C1	7655-A D5
1652 B8	7655-B B5
1653 A8	T117 C1
1654 E1	T118 C1
1655 E1	T119 C1
2651 B1	T120 C1
2652 D2	T121 A8
2653 B2	T122 A8
2654 E2	T123 A8
2655 C3	T124 A8
2656 D3	T125 A8
2657 C4	T126 B8
2658 D4	T127 B8
2659 B4	T128 B8
2660 E4	T129 C8
2661 B6	T130 C8
2662 D6	T131 C8
2663 C6	T132 C8
2664 D6	T133 C8
2665 D6	T134 C8
2666 C6	T135 C8
2667 A1	T136 D8
2668 A2	
2669 C4	
2670 D4	
2671 B1	
3651 B2	
3652 E2	
3653 B2	
3654 E2	
3655 C3	
3656 D3	
3657 C3	
3658 D3	
3659 B3	
3660 E3	
3661 B3	
3662 E3	
3663 B4	
3664 D4	
3665 C4	
3666 D4	
3667 C4	
3668 D4	
3669 B5	
3670 D5	
3671 C6	
3672 D6	
3673 B6	
3674 D6	
3675 A7	
3676 B7	
3681-A C1	
3681-B D1	
3681-C D2	
3681-D C2	
3681-E D2	
3681-F B1	
7651 B3	
7652 E3	
7653 B4	
7654 E4	

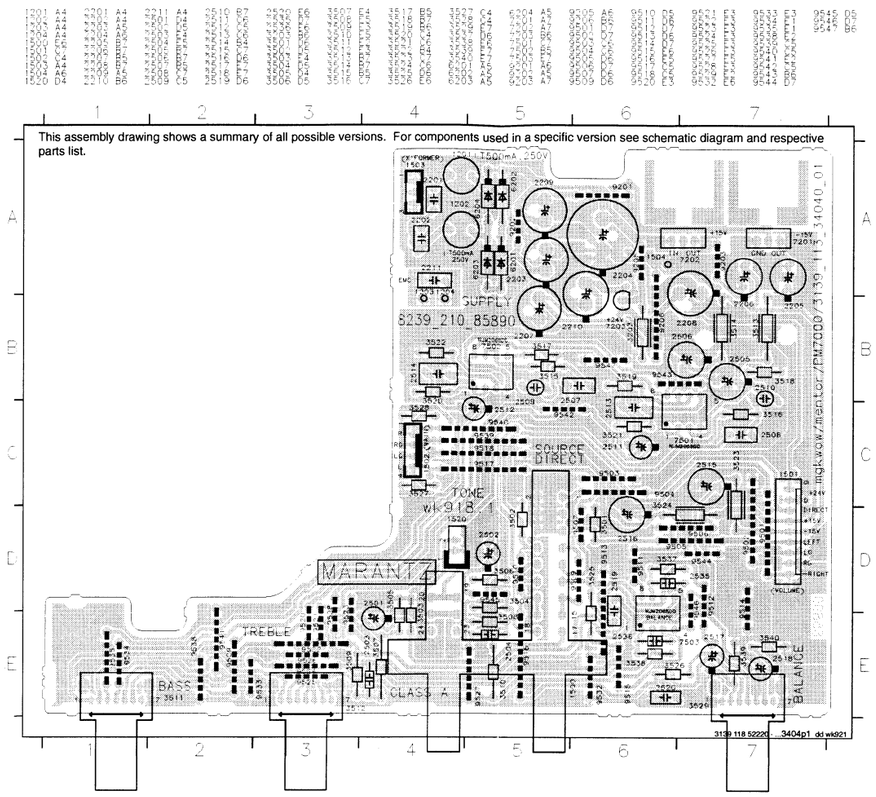
FUNCTION & TAPE IN / OUT & POWER BOARD



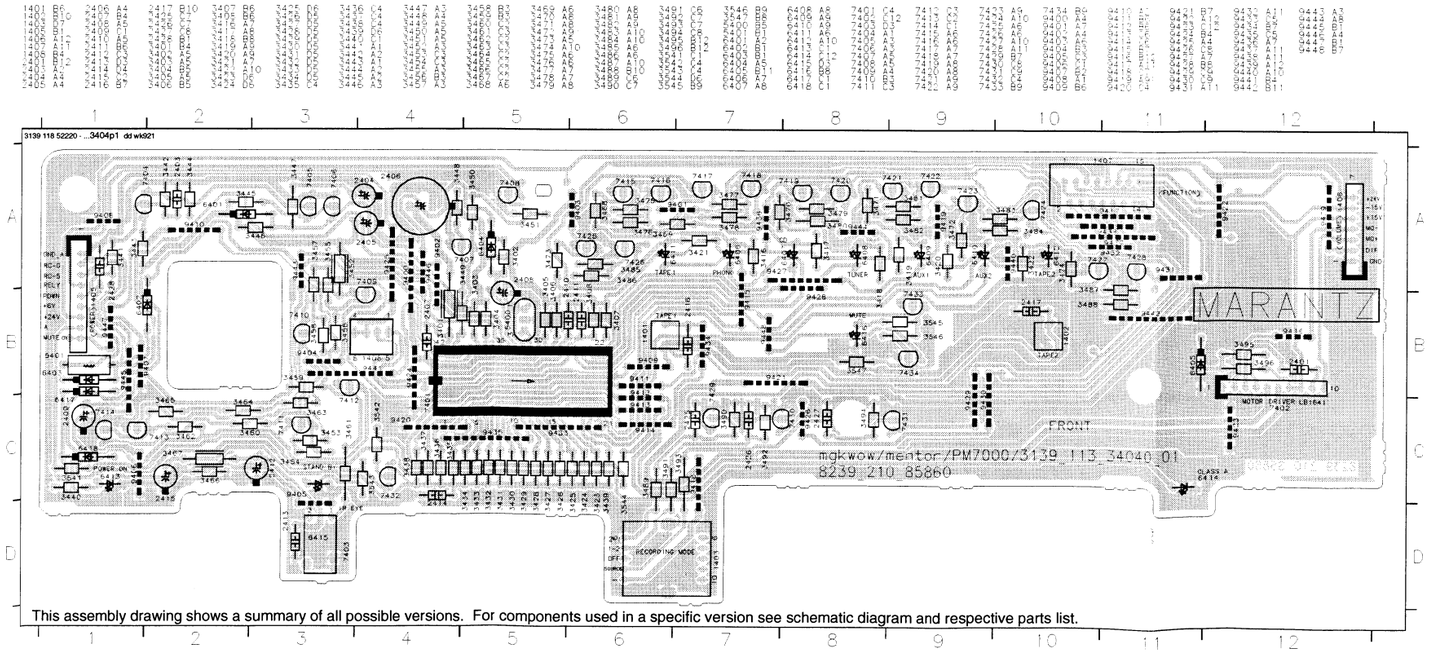
This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list

1257 B 6	3562 C 3	9624 B 3	1232 A 8
1551 C 1	3563 C 4	9625 B 3	1233 A 8
1601 B 1	3564 C 4	9626 B 4	1234 A 8
1602 B 1	3565 C 3	9627 B 3	1401 E 1
1603 A 1	3566 C 3	9628 B 4	2201 F 4
1604 A 6	3567 C 4	9629 B 4	2202 F 3
1606 A 3	3568 C 4	9630 B 4	2204 D 7
1611 B 7	3569 C 4	9631 B 5	2205 F 7
1612 C 7	3570 C 4	9632 B 5	2206 F 8
1613 B 9	3571 C 5	9633 B 5	2207 E 6
2551 C 2	3572 C 5	9634 B 5	2208 D 8
2552 C 2	3573 C 5	9635 B 6	2209 D 9
2553 C 2	3574 C 5	9636 B 6	2210 F 5
2554 C 2	3575 C 6	9637 B 6	2211 F 5
2555 C 2	3576 C 6	9638 B 6	2212 F 5
2556 C 2	3601 C 2	9639 B 5	2214 D 7
2559 C 3	3602 B 2	9640 C 3	2215 D 8
2560 C 3	3603 B 2	9641 A 6	2216 D 8
2561 C 4	3604 B 2	9642 A 6	2217 F 7
2562 C 4	3605 B 2	9643 A 6	2302 E 6
2563 C 3	3606 A 2	9644 A 6	2304 E 5
2564 C 3	3607 A 2	9645 A 6	2305 E 6
2565 C 4	3608 A 2	9646 C 5	2401 E 2
2566 C 4	3609 A 2	9647 A 6	3204 D 7
2567 C 3	3610 A 2	9648 A 6	3207 E 5
2568 C 3	3611 A 2	9649 B 5	3208 F 5
2569 C 5	3612 A 2	9650 B 5	3209 F 6
2570 C 5	3613 B 4	9651 A 5	3210 D 9
2571 C 5	3614 B 4	9652 A 5	3211 F 6
2572 C 5	3615 B 4	9653 A 5	3217 E 6
2573 C 5	3616 B 4	9654 A 4	3218 D 7
2574 C 5	3617 B 6	9655 A 4	5202 F 2
2575 C 6	3618 B 6	9656 A 4	5204 E 8
2601 C 2	3621 C 8	9657 A 4	6202 E 3
2602 B 2	3622 C 8	9658 A 4	6204 E 8
2603 B 2	3623 C 8	9659 A 4	6205 E 7
2604 B 2	3624 C 8	9660 A 4	6206 D 7
2605 B 2	3625 B 8	9661 A 3	6207 D 7
2606 B 2	3626 B 8	9662 A 3	6208 D 7
2607 A 2	3627 B 8	9663 A 6	6209 D 7
2608 A 2	3628 B 8	9664 A 3	6211 D 9
2609 A 2	3629 C 8	9665 A 3	6211 F 5
2610 A 2	3630 C 8	9666 A 3	6212 F 5
2611 A 2	3631 C 8	9667 A 5	6213 F 5
2612 A 2	3632 C 8	9668 A 3	6214 F 5
2613 C 2	3633 B 6	9671 B 9	6215 F 5
2614 B 2	3634 A 6	9672 B 9	6216 F 5
2615 B 2	3635 A 6	9673 B 9	6301 F 6
2616 B 2	3637 B 6	9674 B 9	7301 F 6
2617 B 2	5551 C 6	9675 B 9	9201 E 8
2618 B 2	5601 B 3	9676 C 9	9201 D 8
2619 A 2	5602 B 3	9677 C 9	9201 F 4
2620 A 2	5603 B 3	9678 C 9	9201 F 4
2621 A 2	5604 A 3	9679 C 9	9205 F 2
2622 A 2	5605 B 4	9680 C 9	9206 F 2
2623 A 2	5606 B 4	9681 C 7	9207 E 6
2624 A 2	5607 B 5	9682 C 7	9208 E 6
2631 C 7	5608 B 5	9683 B 7	9209 F 5
2632 C 7	5609 A 5	9684 B 7	9211 F 3
2633 C 7	5610 A 5	9685 B 8	9211 F 7
2634 C 7	5611 A 4	9686 B 8	9211 E 8
2635 B 7	5612 A 4	9687 C 8	9211 E 8
2636 B 7	6605 B 5	9688 C 8	9211 D 8
2637 B 7	6608 B 6	9689 C 8	9211 D 7
2638 B 7	7551 C 3	9690 C 8	9211 D 7
2639 C 8	7552 C 3	9691 B 8	9211 D 7
2640 C 8	7553 C 3	9692 B 8	9211 E 6
2641 C 8	7554 C 3	----	9211 E 8
2642 C 8	7555 C 4	----	9221 E 8
2643 B 8	7601 A 6	1201 F 3	9221 F 3
2644 B 8	7602 A 6	1202 F 2	9221 F 3
2645 B 8	9501 C 3	1203 F 2	9221 E 2
2646 B 8	9601 C 2	1204 F 2	9221 E 2
2647 B 3	9602 B 2	1206 F 2	9221 F 2
2648 B 3	9603 B 2	1207 F 3	9221 D 7
2649 B 3	9604 A 2	1208 F 3	
2650 A 3	9605 A 2	1211 F 3	
2651 B 4	9606 A 2	1213 D 8	
2652 B 5	9607 B 3	1214 D 8	
2653 A 5	9608 B 3	1215 D 9	
2654 A 5	9609 B 3	1216 D 8	
2655 A 5	9610 A 4	1217 D 7	
2656 A 4	9611 A 2	1218 E 9	
2659 B 6	9612 A 2	1219 E 9	
3551 C 2	9613 A 2	1221 F 2	
3552 C 2	9614 A 3	1222 D 8	
3553 C 2	9615 B 3	1223 F 2	
3554 C 2	9616 B 3	1224 A 7	
3555 C 4	9617 B 3	1225 A 7	
3556 C 4	9618 B 3	1226 A 7	
3557 C 4	9619 B 3	1227 A 7	
3558 C 4	9620 B 3	1228 A 7	
3559 C 5	9621 B 3	1229 F 3	
3560 C 5	9622 B 3	1230 F 4	
3561 C 3	9623 B 3	1231 A 8	

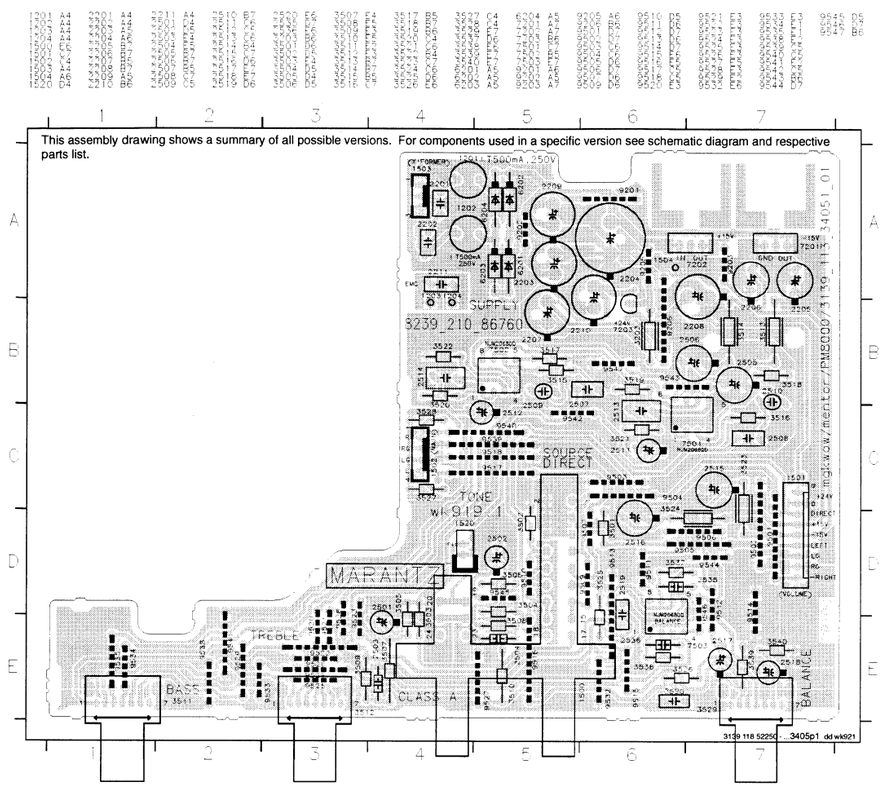
TONE BOARD (PM7000)


This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.
8239 210 85890
MARANTZ
TONE
wk918 1
SOURCE DIRECT
TREBLE
BASS
CLASS A
BALANCE
3139 118 52220 ...3404p1 dd wk921

FRONT BOARD

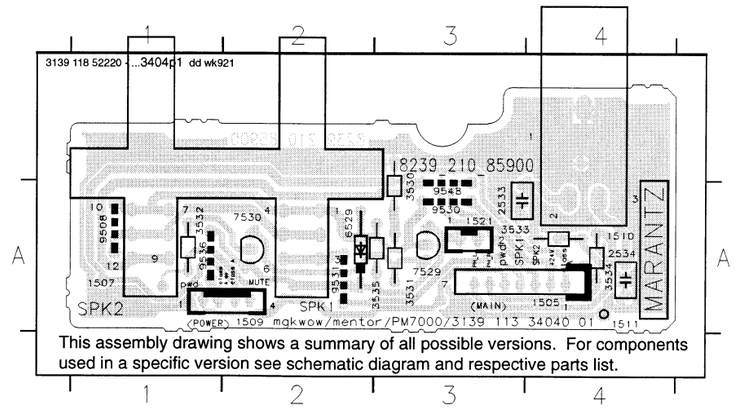

3139 118 52220 - ...3404p1 dd wk921
MARANTZ
FRONT
mgkwow/mentor/PM7000/3139 113 34040 01
8239 210 85860
This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.

TONE BOARD (PM8000)


This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.
8239 210 86760
MARANTZ
TONE
wk919 1
SOURCE DIRECT
TREBLE
BASS
CLASS A
BALANCE
3139 118 52250 ...3405p1 dd wk921

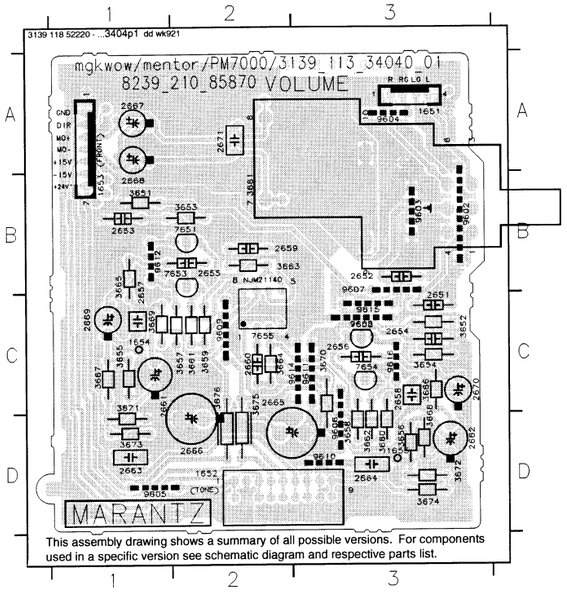
SPK SW BOARD

1505 A4 1510 A4 2533 A3 3531 A3 3534 A4 7529 A3 9530 A3 9548 A3
1507 A1 1511 A4 2534 A4 3532 A1 3535 A3 7530 A2 9531 A2
1509 A2 1521 A3 3530 A3 3533 A3 6529 A2 9508 A1 9536 A1


3139 118 52220 - ...3404p1 dd wk921
8239 210 85900
MARANTZ
SPK2
SPK1
MUTE
(POWER) 1509 mgkwow/mentor/PM7000/3139 113 34040 01
(MAIN) 1505
This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.

VOLUME BOARD (PM7000)

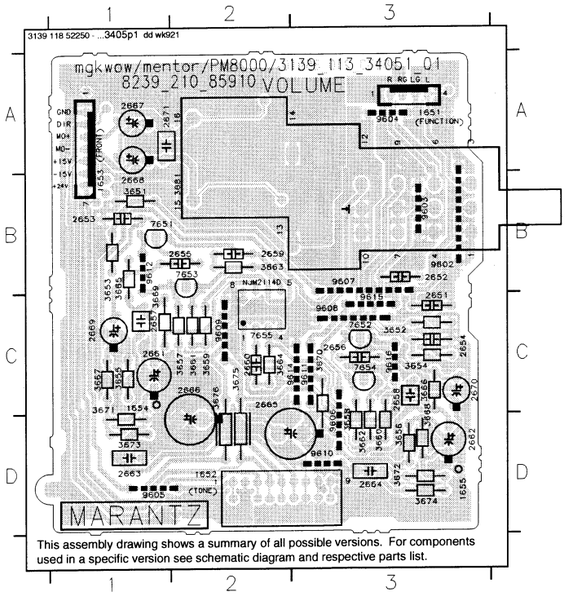
1651	A3	2657	B1	2668	B1	3658	D3	3669	C1	7653	B2	9610	D3
1652	D2	2658	B3	2669	C1	3659	C2	3670	C3	7654	C3	9611	C3
1653	B1	2659	B2	2670	C3	3660	D3	3671	C1	7655	B3	9612	B2
1654	C1	2660	B3	2671	A1	3661	C2	3672	D3	9602	B3	9614	C2
1655	D3	2661	C1	3651	B1	3662	D3	3673	D1	9603	B3	9615	C3
2651	C3	2662	D3	3652	C3	3663	B2	3674	D3	9604	A3	9616	C3
2652	D3	2663	C3	3653	B1	3664	C2	3675	C2	9605	D1		
2653	B1	2664	D3	3654	C3	3665	B1	3676	C2	9606	D3		
2654	C3	2665	C2	3655	C1	3666	C3	3681	B2	9607	B3		
2655	B2	2666	C3	3656	D3	3667	C1	7651	B1	9608	C3		
2656	C3	2667	A1	3657	C2	3668	D3	7652	C3	9609	C2		



This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.

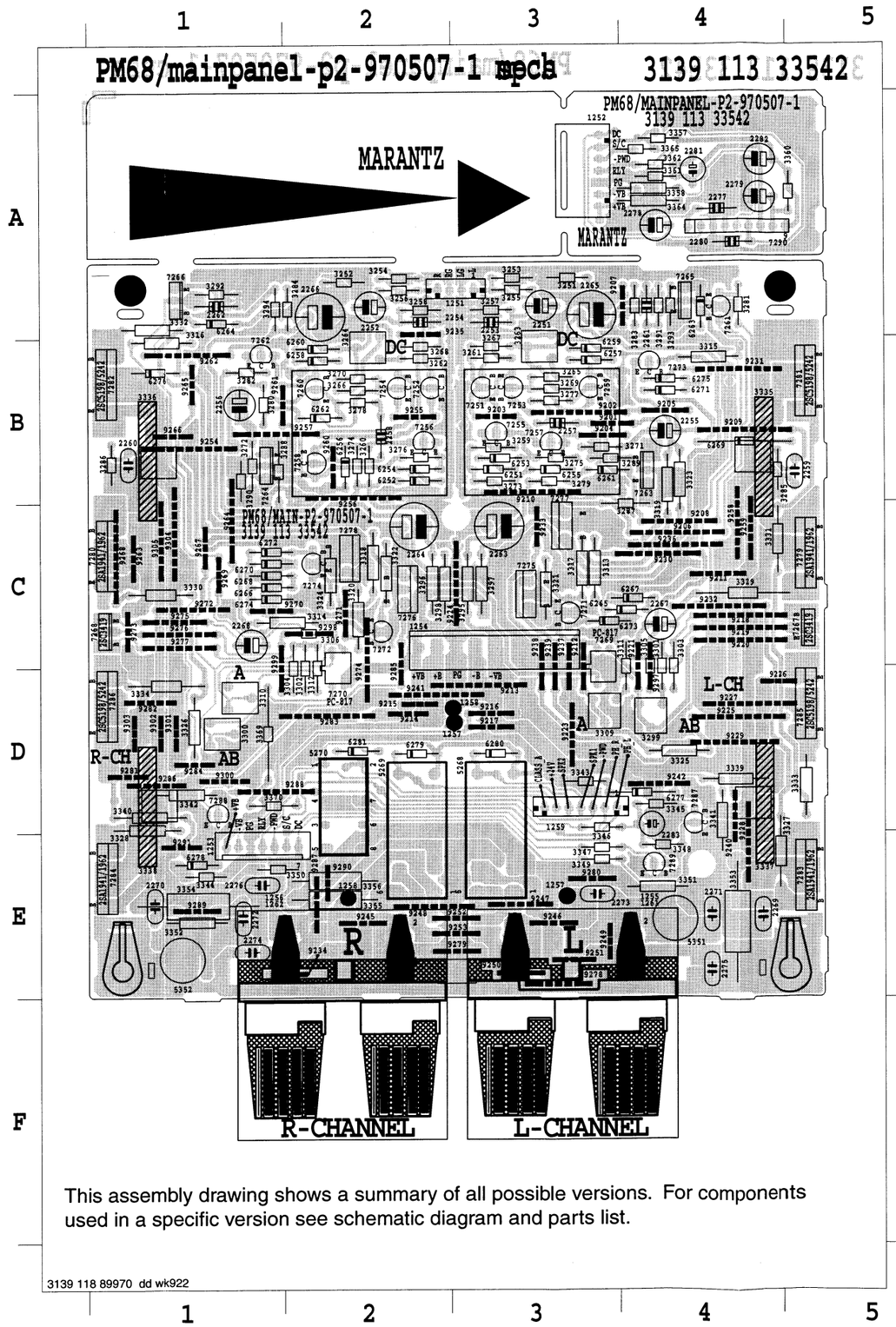
VOLUME BOARD (PM8000)

1651	A3	2657	C1	2668	B1	3658	D3	3669	C1	7653	B2	9610	D3
1652	D2	2658	C3	2669	C1	3659	C2	3670	C3	7654	C3	9611	C3
1653	B1	2659	B2	2670	C3	3660	D3	3671	C1	7655	B3	9612	B2
1654	C1	2660	C2	2671	A1	3661	C2	3672	D3	9602	B3	9614	C2
1655	D3	2661	C1	3651	B1	3662	D3	3673	D1	9603	B3	9615	C3
2651	C3	2662	D3	3652	C3	3663	B2	3674	D3	9604	A3	9616	C3
2652	D3	2663	C3	3653	B1	3664	C2	3675	C2	9605	D1		
2653	B1	2664	D3	3654	C3	3665	B1	3676	C2	9606	D3		
2654	C3	2665	C2	3655	C1	3666	C3	3681	B2	9607	B3		
2655	B2	2666	C3	3656	D3	3667	C1	7651	B1	9608	C3		
2656	C3	2667	A1	3657	C2	3668	D3	7652	C3	9609	C2		



This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.

MAIN & SP PROTECT BOARD



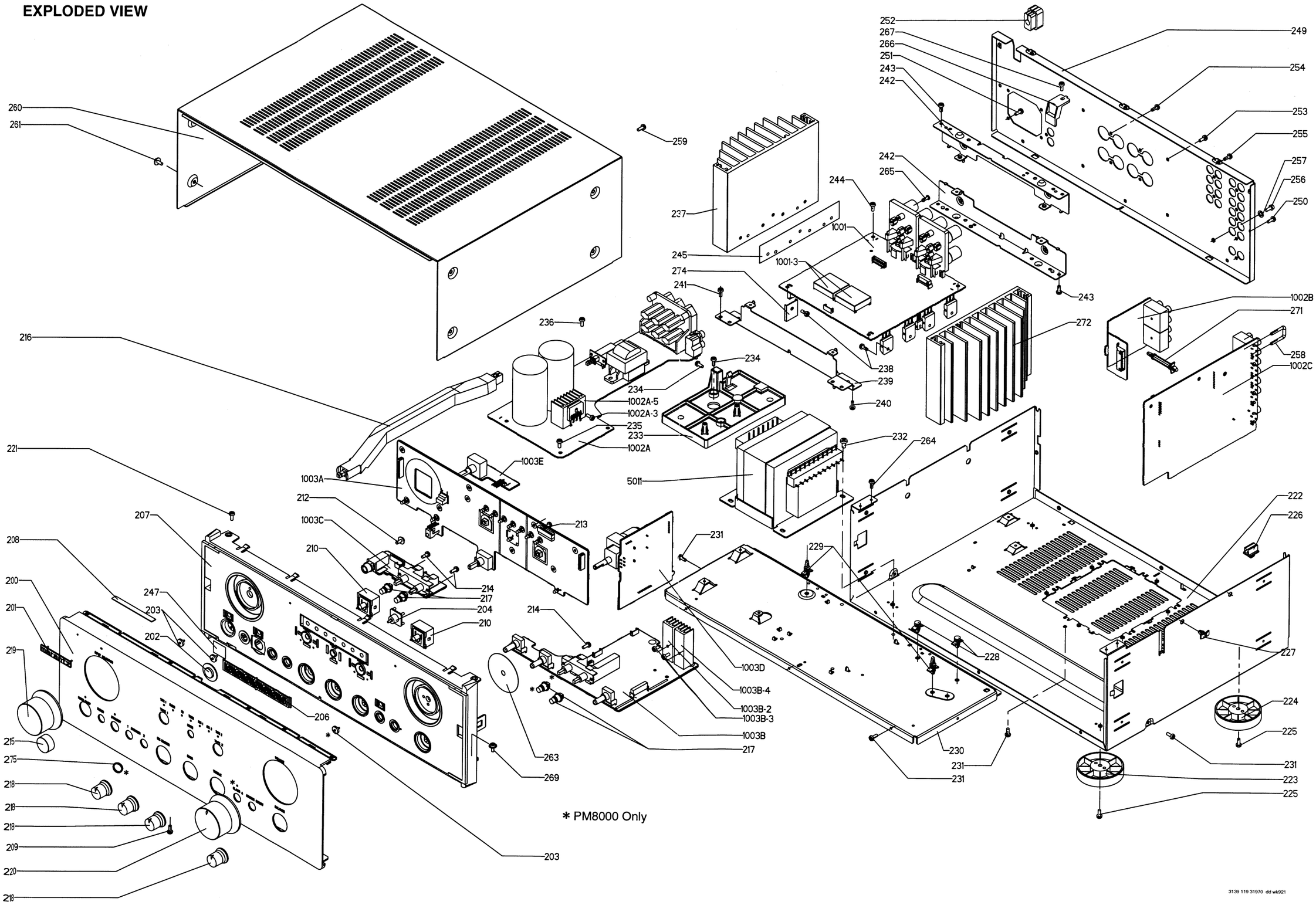
This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and parts list.

3139 118 89970 dd wk922

1251	A3	3304	D2	6281	D2	9256	B2				
1252	A3	3305	D4	7251	B3	9257	B1				
1253	E1	3306	C2	7252	B2	9258	C4				
1254	C3	3309	D3	7253	B3	9259	C4				
1255	F3	3310	D1	7254	B2	9260	B2				
1256	F2	3311	D4	7255	B3	9261	B1				
1259	D3	3312	D2	7256	B2	9262	B1				
1261	F3	3313	C3	7257	B3	9263	C1				
1262	F2	3314	C2	7258	B2	9264	C1				
2251	A3	3315	B4	7259	B3	9265	B1				
2252	A2	3316	B1	7260	B2	9266	B1				
2253	A3	3317	C3	7261	A4	9267	C1				
2254	A2	3318	C2	7262	B1	9268	C1				
2255	B4	3319	B4	7263	B4	9269	C1				
2256	B1	3320	C2	7264	B1	9270	C1				
2257	B3	3321	C3	7265	A4	9271	C2				
2258	B2	3322	C2	7266	A1	9272	C1				
2259	B5	3323	B4	7267	C5	9273	C1				
2260	B1	3324	C2	7268	C1	9274	C2				
2261	A4	3325	D4	7269	D3	9275	C1				
2262	A1	3326	D1	7270	D2	9276	C1				
2263	C3	3327	E4	7271	C3	9277	C1				
2264	C2	3328	D1	7272	C2	9278	E3				
2265	A3	3329	C4	7273	B4	9279	E3				
2266	A2	3330	C1	7274	C2	9280	E3				
2267	C4	3331	C4	7275	C3	9281	D1				
2268	C1	3332	A1	7276	C2	9282	D1				
2269	E4	3333	D5	7277	C3	9283	D2				
2270	E1	3334	D1	7278	C2	9284	D1				
2271	E4	3335	B4	7279	C5	9285	C2				
2272	E1	3336	B1	7280	C1	9286	D1				
2273	E3	3337	D4	7281	B5	9287	E2				
2274	E1	3338	D1	7282	B1	9288	D1				
2275	E4	3339	D4	7283	E5	9289	E1				
2276	E1	3340	D1	7284	E1	9290	E2				
2277	A4	3341	D4	7285	D5	9291	E1				
2278	A4	3342	D1	7286	D1	9297	D4				
2279	A4	3343	D3	7287	D4	9298	C2				
2280	A4	3344	E1	7288	D1	9299	D1				
2281	A4	3345	D4	7289	E4	9300	D1				
2282	A4	3346	D3	7290	A4	9301	D1				
2283	D4	3347	E3	9201	B3	9302	D1				
3251	A3	3348	E4	9202	B3	9303	D1				
3252	A2	3349	E3	9203	B3	9314	C1				
3253	A3	3350	E1	9204	B3	9315	C1				
3254	A2	3351	E4	9205	B4	----					
3255	A3	3352	E1	9206	C4						
3256	A2	3353	E4	9207	A4						
3257	A3	3354	E1	9208	C4						
3258	A2	3355	E2	9209	B4						
3259	B3	3356	E2	9210	B3						
3260	B2	3357	A4	9211	C4						
3261	B3	3358	A4	9212	D3						
3262	B2	3360	A5	9213	D3						
3263	B3	3361	A4	9214	D2						
3264	B2	3362	A4	9215	D2						
3265	B3	3364	A4	9216	D3						
3266	B2	3365	A4	9217	D3						
3267	B3	3369	D1	9218	C4						
3268	B2	3370	D1	9219	C4						
3269	B3	5268	E3	9220	C4						
3270	B2	5269	E2	9221	D4						
3271	B3	5270	D2	9223	D3						
3272	B1	5351	E4	9224	C3						
3273	B3	5352	E1	9225	D4						
3274	B2	6251	B3	9226	D4						
3275	B3	6252	B2	9227	D4						
3276	B2	6253	B3	9228	E4						
3277	B3	6254	B2	9229	D4						
3278	B2	6255	B3	9230	C4						
3279	B3	6256	B2	9231	B4						
3280	B1	6257	B3	9232	C4						
3281	A4	6258	B2	9233	C3						
3282	B1	6259	B3	9234	E2						
3283	A4	6260	B2	9235	A2						
3284	A2	6261	B3	9236	C4						
3285	B4	6262	B2	9237	D3						
3286	B1	6263	A4	9238	D3						
3287	C4	6264	A1	9239	D3						
3288	B1	6265	C4	9240	D4						
3289	B3	6266	C1	9241	D2						
3290	B1	6267	C4	9242	D4						
3291	A4	6268	C1	9243	D3						
3292	A1	6269	B4	9244	D3						
3293	A4	6270	C1	9245	E2						
3294	A1	6271	B4	9246	E3						
3295	C3	6272	C1	9247	E3						
3296	C2	6273	C3	9248	E2						
3297	C3	6274	C1	9249	E3						
3298	C2	6275	B4	9250	E3						
3299	D4	6276	B1	9251	E3						
3300	D1	6277	D4	9252	E3						
3301	D4	6278	E1	9253	E3						
3302	D2	6279	D2	9254	B1						
3303	D4	6280	D3	9255	B2						

7. EXPLODED VIEW AND PARTS LIST

EXPLODED VIEW



* PM8000 Only

3139 119 31970 dd wk921

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
200	PM7000 BLK	3139 117 88070	FRONT PANEL BLACK
200	PM8000 BLK	3139 117 88080	FRONT PANEL BLACK
200	PM7000 GLD	3139 117 88050	FRONT PANEL GOLD
200	PM8000 GLD	3139 117 88060	FRONT PANEL GOLD
201		4822 454 11825	PLATE, INDICATION
202	BLK	3139 114 66790	WINDOW IR BLACK
202	GLD	3139 114 66800	WINDOW IR GOLD
203		3139 114 66920	LIGHT GUIDE POWER/CLASS
204		3139 114 66900	LIGHT GUIDE MUTE
206		3139 114 66910	LIGHT GUIDE SOURCE
207	BLK	3139 114 66940	CABINET, FRONT BLACK
207	GLD	3139 117 88580	CABINET, FRONT GOLD
210	BLK	3139 114 66930	BUTTON TAPE BLACK
210	GLD	3139 117 88610	BUTTON TAPE GOLD
215	BLK	4822 410 12499	PUSH BUTTON, POWER
215	GLD	4822 410 12552	PUSH BUTTON, POWER
216		3139 114 66970	LINK, POWER
217	BLK	3139 114 66770	BUTTON, PUSH BLACK
217	GLD	3139 117 88600	BUTTON, PUSH GOLD
218	BLK	3139 114 66750	KNOB, ROTARY BLACK
218	GLD	3139 117 88590	KNOB, ROTARY GOLD
219	BLK	3139 117 88040	KNOB, SELECTOR BLACK
219	GLD	3139 117 88110	KNOB, SELECTOR GOLD
220	BLK	3139 117 88030	KNOB, VOL BLACK
220	GLD	3139 117 88090	KNOB, VOL GOLD
223		4822 462 42129	FOOT FRONT
224		4822 462 42129	FOOT REAR
252		4822 532 60948	BUSH, PLASTIC
256		4822 502 13921	SCREW, STEEL
271		4822 404 10933	PLASTIC SUPPORT(LCBS-22)
⚠ 385	N	4822 321 11139	MAINS CORD
⚠ 385	U	4822 321 11464	MAINS CORD
⚠ 385	F	4822 321 11349	MAINS CORD
1605		4822 323 10406	FLEX CABLE 15P
⚠ 5011	PM7000 N	4822 146 10823	MAINS TRANSFORMER
⚠ 5011	PM8000 N	4822 146 10844	MAINS TRANSFORMER
⚠ 5011	PM7000 U	4822 146 10854	MAINS TRANSFORMER
⚠ 5011	PM8000 F	4822 146 10853	MAINS TRANSFORMER
			PACKING
384		3139 228 82240	REMOTE CONTROL RC0465/02
387	N	3139 116 18910	USER GUIDE
387	U	3139 116 18920	USER GUIDE
387	F	3139 116 18930	USER GUIDE

8. IDLING CURRENT AND DC OFFSET VOLTAGE ALIGNMENT

8.1 Quiescent Current Adjustment for Class AB

-Set to CD mode with no input, minimum volume position & mains supply at 230 V ±5 %.

-Power up the unit, adjust **SLOWLY** 3299 (L) & 3300 (R) until voltage across L-Channel -----3335 (T007 / T006) & 3337 (T009 / T010), R-Channel ----- 3336 (T013 / T014) & 3338 (T015 / T016) is as per the table below.

Time	Voltege
after 30 sec to 1 min*	0.3 mV to < 0.4 mV

- After 30 min, the voltage should settle down to 18 mV ± 3 mV.

* Start from cold condition.

8.2 Quiescent Current Adjustment for Class A.

- Next, switch to Class A operation. Adjust **SLOWLY** 3309 (L) & 3310 (R) until voltage across L-Channel ----- 3335 (T007 / T006) & 3337 (T009 / T010) , R-Channel ----- 3336 (T013 / T014) & 3338 (T015 / T016) is as per the table below.

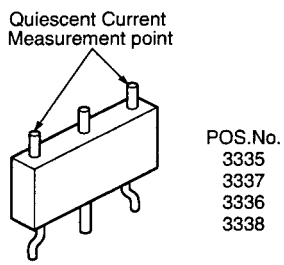
Time	Voltage
after 0 sec to 30 sec**	65 mV to <70 mV

- After 30 min, the voltage should settle down to 90 mV ± 5 mV.

** Continue immediately after 8.1

REMARKS:

- Please take note that for both Class AB & A alignment, at all time during adjustment, refer to the higher reading of each channel.



8.3 DC Offset.

- Adjust 3263 and 3264 until DC offset voltage is less than ±10 mV at Speaker output terminal.

8.アイドリング電流およびDCオフセット電圧調整

8.1 アイドリング電流調整（Class AB）

1) 本体の電源スイッチを入れる前に、ボリュームを最小に、バランス及びトーンコントロールをセンターに合わせます。
2) CDモードにし、電源電圧を100Vにします。
3) セメント抵抗、3335 (T007 / T006) 、3337 (T009 / T010) のLチャンネルと3336 (T013 / T014) 、3338 (T015 / T016) のRチャンネル各々の電圧が下記の値になるまで、半固定抵抗3299 (L) と3300 (R) をゆっくり調整します。

時間	電圧
30秒－1分＊	0.3mV以上0.4mV以下

30分後、電圧は18mV±3mVに安定します。

＊冷却状態からスタートします。

8.2アイドリング電流調整（Class A）

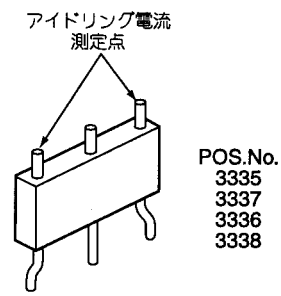
1) A クラス動作に切り換えます。
2) セメント抵抗3335 (T007 / T006)、3337 (T009 / T010) のLチャンネルと3336 (T013 / T014)、3338(T015 / T016)のRチャンネル各々の電圧が下記の値になるまで、半固定抵抗3309 (L) と3310 (R) ゆっくり調整します。

時間	電圧
0秒－30秒　＊＊	65mV以上70mV以下

30分後、電圧は90mV±5mVに安定します。

＊＊切換え後、すぐに行ってください。

注意：Aクラス動作及びABクラス動作のアイドリング電流調整において、同チャンネル内の2ケ所の測定点で指示値に差異があった場合は、高い方の電圧値が調整範囲内となるようにします。



8.3 DCオフセット電圧調整

DCオフセット電圧が、スピーカー出力端子で10mV以下になるまで半固定抵抗3263と3264を調整します。

9. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTORS

R* **: 1) GD05 x x x 140, Carbon film fixed resistor, ±5% 1/4W
R* **: 2) GD05 x x x 160, Carbon film fixed resistor, ±5% 1/6W
① Resistance value

Examples ;
① Resistance value

0.1 Ω 001	10 Ω 100	1k Ω ... 102	100k Ω 104
0.5 Ω 005	18 Ω 180	2.7k Ω ... 272	680k Ω 684
1 Ω 010	100 Ω 101	10k Ω ... 103	1M Ω 105
6.8 Ω 068	390 Ω 391	22k Ω ... 223	4.7M Ω 475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

C* **: CERAMIC CAP.
3) DD1 x x x x 370, Ceramic capacitor
Disc type
Temp.coeff. P350~N1000, 50V
③ Capacity value
② Tolerance

Examples
② ATolerance (Capacity deviation)
± 0.25 pF 0
± 0.5 pF 1
± 5 % 5
* Tolerance of COMMON PARTS handled here are as follows :
0.5 pF - 5 p ..... ± 0,25 pF
6 pF - 10 pF ..... ± 0.5 pF
12 F - 560 pF ... ± 5 %
③ Capacity value

0.5 pF 005	3 pF 030	100 pF 101
1 pF 010	10 pF 100	220 pF 221
1.5 p 015	47 pF 470	560 pF ..... .561

C* **: CERAMIC CAP.
4) DK16 x x x 300, High dielectric constant ceramic capacitor
Disc type
Temp.chara. 2B4, 50V
④ Capacity value

Examples
④ Capacity value

100 pF 101	1000 pF 102	10000 pF 103
470 pF 471	2200 pF 222	

C* ** 5)ELECTROLY CAP.(⫫), 6)FILM CAP (⫩)
5) EA x x x x x 10, Electrolytic capacitor
One-way lead typeTolerance ±20%
⑥ Working voltage
⑤ Capacity value

Examples
⑤ Capacity value

0.1µ F 04	4.7µ F 475	100µ F 107
0.33µ F 334	10µ F 106	330µ F 337
1µ F 105	22µ F 226	1100µ F 118
		2200µ F 228

⑥ Working voltage

6.3 V. . .006	25 V. . .025
10 V. . .010	35 V. . .035
16 V. . .016	50 V. . .050

6) DF15 x x x 350 → Plastic film capacitor
DF15 x x x 310 → One-way type, Mylar ±5% 50V
DF16 x x x 310 → Plastic film capacitor
One-way type, Mylar ±10% 50V
⑦ Capacity value

Examples
⑦ Capacity valu

0.001µ F (1000pF) 102	0.1µ F..... 104
0.0018µ F..... 182	0.56µ F..... 564
0.01µ F..... 103	1µ F..... 105
0.015µ F..... 151	

NOTE :1) The above CODES(R* **, R* **, C * **, C * ** and C* **) are omitted on the schematic diagram in some case.
2) On the occasion, be confirmed the common parts on the parts list.
3) Refer to "Common Parts List" for the other common parts(**RI05, DD4, DK4**).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows ;

1 . KOA Corporation

Part No.(MJI)	Type No.(KOA)	Description
NH05 x x x 140	→ RF25S x x x x Ω J	(±5% 1/4W)
NH05 x x x 120	→ RF50S x x x x Ω J	(±5% 1/2W)
NH85 x x x 110	→ RF73B2A x x x x Ω J	(±5% 1/10W)
NH95 x x x 140	→ RF73B2E x x x x Ω J	(±5% 1/4W)

* Resistance value — Resistance value(0.1 Ω- 10k Ω)

2. Matsushita Electronic Components Co., Ltd

Part No.(MJI)	Type No.(MEC)	Description
NF05 x x x 140	→ ERD-2FCJ x x x	(±5% 1/4W)
RF05 x x x 140		
NF02 x x x 140	→ ERD-2FCG x x x	(±2% 1/4W)
RF02 x x x 140		

* Resistance value

Examples :
* Resistance value

0.1 Ω 001	10 Ω 100	1k Ω .. 102	100k Ω 104
0.5 Ω 005	18 Ω 180	2.7k Ω .. 272	680k Ω 684
1 Ω 010	100 Ω 101	10k Ω .. 103	1M Ω 105
6.8 Ω 068	390 Ω 391	22k Ω .. 23	4.7M Ω 475

ABBREVIATION AND MARKS

ANT.	: ANTENNA	BATT.	: BATTERY
CAP.	: CAPACITOR	CER.	: CERAMIC
CONN.	: CONNECTING	DIG.	: DIGITAL
HP	: HEADPHONE	MIC.	: MICROPHONE
µ -PRO	: MICROPROCESSOR	REC.	: RECORDING
RES.	: RESISTOR	SPK	: SPEAKER
SW	: SWITCH	TRANSF.	: TRANSFORMER
TRIM.	: TRIMMING	TRS.	: TRANSISTOR
VAR.	: VARIABLE	X'TAL	: CRYSTAL

NOTE ON SAFETY:

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ⚠ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意：

⚠ がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
			FUNCTION CIRCUIT BOARD
			CAPACITORS
2551		4822 126 12147	CER. 22NF 10% 25V
2552		4822 126 12147	CER. 22NF 10% 25V
2553	N	4822 122 33519	CER. 470pF 10% 50V
2554	N	4822 122 33519	CER. 470pF 10% 50V
2555	N	4822 126 14316	CER. 680pF 10% 50V
2555	U, F	4822 122 33849	CER. 150pF 10% 50V
2556	N	4822 126 14316	CER. 680pF 10% 50V
2556	U, F	4822 122 33849	CER. 150pF 10% 50V
2559		4822 124 12023	ELECT 47µF 20% 25V
2560		4822 124 12023	ELECT 47µF 20% 25V
2561		4822 121 70654	FILM 2N2 10% 50V
2562		4822 121 70654	FILM 2N2 10% 50V
2563		4822 121 51399	FILM 47NF 10% 50V
2564		4822 121 51399	FILM 47NF 10% 50V
2565		4822 121 10685	FILM 1.8NF 10% 50V
2566		4822 121 10685	FILM 1.8NF 10% 50V
2567		4822 121 41935	FILM 12NF 5% 250V
2568		4822 121 41935	FILM 12NF 5% 250V
2569		4822 124 12024	ELECT 10µF 20% 16V
2570		4822 124 12024	ELECT 10µF 20% 16V
2571		4822 121 10696	FILM 4.7NF 2% 50V
2572		4822 121 10696	FILM 4.7NF 2% 50V
2573		4822 124 12022	ELECT 220µF 20% 25V
2574		4822 124 12022	ELECT 220µF 20% 25V
2575		4822 124 40248	ELECT 10µF 20% 63V
2601			
∫		4822 126 12147	CER. 22NF 10% 25V
2612			
2613			
∫	N	4822 122 33849	CER. 150pF 10% 50V
2624			
2647			
∫		4822 124 40248	ELECT 10µF 20% 63V
2656			
2659		4822 124 11566	ELECT 47µF 20% 50V
			RESISTORS
3551		4822 116 83872	220R 5% 0.5W
3552		4822 116 83872	220R 5% 0.5W
3553		4822 116 83884	47K 5% 0.5W
3554		4822 116 83884	47K 5% 0.5W
3555			
∫		4822 116 52283	4K7 5% 0.5W
3560			
3561		4822 116 52206	120E 5% 0.5W
3562		4822 116 52206	120E 5% 0.5W
3563		4822 116 52175	100E 5% 0.5W
3564		4822 116 52175	100E 5% 0.5W
3565		4822 116 52234	100K 5% 0.5W
3566		4822 116 52234	100K 5% 0.5W
3567		4822 116 52289	5K6 5% 0.5W
3568		4822 116 52289	5K6 5% 0.5W
3569		4822 116 52175	100E 5% 0.5W
3570		4822 116 52175	100E 5% 0.5W
3571		4822 116 52234	100K 5% 0.5W
3572		4822 116 52234	100K 5% 0.5W
3573		4822 116 83872	220R 5% 0.5W
3574		4822 116 83872	220R 5% 0.5W
3575		4822 052 10479	47R 5% 0.33W
3576		4822 052 10479	47R 5% 0.33W
3601			
∫		4822 116 83866	1M 5% 0.5W
3618			
3633		4822 050 21003	10K 1% 0.6W
3634		4822 050 21003	10K 1% 0.6W
3635		4822 050 21003	10K 1% 0.6W
3637		4822 050 21003	10K 1% 0.6W

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
			SEMICONDUCTORS
6605		4822 130 30621	DIODE 1N4148
6608		4822 130 30621	DIODE 1N4148
7555		4822 209 31153	IC NJM2114D
7551			
∫		4822 130 42839	FET 2SK369BL
7554			
7601		4822 130 44568	TRS. BC557B
7602		4822 130 40959	TRS. BC547B
			MISCELLANEOUS
1551		4822 265 10311	CONNECTOR, 2P
1601		4822 265 10311	CONNECTOR, 2P
1602	PM7000	4822 267 20453	CONNECTOR, 6P
1602	PM8000	4822 265 11061	CONNECTOR, 6P
1603	PM7000	4822 267 31452	CONNECTOR, CABLE/WIRE
1603	PM8000	4822 265 30996	CONNECTOR, CABLE/WIRE
1604		4822 267 50915	CONNECTOR, 15P
5551		4822 280 20501	RELAY MR62-24SR
5601			
∫		4822 280 20501	RELAY MR62-24SR
5612			
			TAPE IN/OUT CIRCUIT BOARD
			CAPACITORS
2631			
∫		4822 126 12147	CER. 22NF 10% 25V
2638			
2639			
∫	N	4822 122 33849	CER. 150pF 10% 50V
2646			
			RESISTORS
3621			
∫		4822 116 83866	1M 5% 1/6W
3628			
3629			
∫		4822 116 83883	470R 5% 0.5W
3632			
			MISCELLANEOUS
1611	PM7000	4822 267 31452	CONNECTOR, CABLE/WIRE
1611	PM8000	4822 265 30996	CONNECTOR, CABLE/WIRE
1612	PM7000	4822 267 31452	CONNECTOR, CABLE/WIRE
1612	PM8000	4822 265 30996	CONNECTOR, CABLE/WIRE
			VOLUME CIRCUIT BOARD
			CAPACITORS
2653		4822 122 33195	CER. 100pF 10% 50V
2654		4822 122 33195	CER. 100pF 10% 50V
2657		4822 122 33524	CER. 22pF 5% 50V
2658		4822 122 33524	CER. 22pF 5% 50V
2659		4822 126 12339	CER. 2.2NF 10%
2660		4822 126 12339	CER. 2.2NF 10%
2661		4822 124 12026	ELECT 22µF 20% 25V
2662		4822 124 12026	ELECT 22µF 20% 25V
2663		4822 121 10686	FILM 4.7NF 10% 50V
2664		4822 121 10686	FILM 4.7NF 10% 50V
2665		4822 124 12434	ELECT 220µF 20% 16V
2666		4822 124 12434	ELECT 220µF 20% 16V
2667		4822 124 40769	ELECT 4.7µF 20% 10V
2668		4822 124 40769	ELECT 4.7µF 20% 10V
2669		4822 124 12027	ELECT 2.2µF 20% 50V
2670		4822 124 12027	ELECT 2.2µF 20% 50V
2671		4822 122 30043	CER. 10NF 80% 63V

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
			RESISTORS
3651	PM7000	4822 116 83874	220K 5% 0.5W
3651	PM8000	4822 116 52244	15K 5% 0.5W
3652	PM7000	4822 116 83874	220K 5% 0.5W
3652	PM8000	4822 116 52244	15K 5% 0.5W
3653		4822 050 11002	1K 1% 0.4W
3654		4822 050 11002	1K 1% 0.4W
3655	PM7000	4822 116 52206	120E 5% 0.5W
3655	PM8000	4822 116 83876	270R 5% 0.5W
3656	PM7000	4822 116 52206	120E 5% 0.5W
3656	PM8000	4822 116 83876	270R 5% 0.5W
3657			
∫		4822 116 52283	4K7 5% 0.5W
3662			
3663		4822 116 83872	220R 5% 0.5W
3664		4822 116 83872	220R 5% 0.5W
3665		4822 116 83866	1M 5% 0.5W
3666		4822 116 83866	1M 5% 0.5W
3667	PM7000	4822 050 11002	1K 1% 0.4W
3667	PM8000	4822 116 52256	2K2 5% 0.5W
3668	PM7000	4822 050 11002	1K 1% 0.4W
3668	PM8000	4822 116 52256	2K2 5% 0.5W
3669		4822 116 52175	100E 5% 0.5W
3670		4822 116 52175	100E 5% 0.5W
3671		4822 116 52234	100K 5% 0.5W
3672		4822 116 52234	100K 5% 0.5W
3673		4822 116 83872	220R 5% 0.5W
3674		4822 116 83872	220R 5% 0.5W
⚠ 3675		4822 052 10479	47R 5% 0.33W
⚠ 3676		4822 052 10479	47R 5% 0.33W
3681	PM7000	4822 101 11789	VARIAB. 50K X2 20% 0.05W
3681	PM8000	4822 101 11803	VARIAB. RK16314MC(50KX2)
			SEMICONDUCTORS
7651			
∫		4822 130 42839	FET 2SK369BL
7654			
7655		4822 209 31153	IC NJM2114D
			FRONT CIRCUIT BOARD
			CAPACITORS
2401		4822 121 51387	FILM 10NF 20% 16V
2403		4822 121 51387	FILM 10NF 20% 16V
2404		4822 124 81151	ELECT 22μF 50V
2405		4822 124 81151	ELECT 22μF 50V
2406		4822 124 80818	ELECT 22M 5.5V
2407		4822 126 12882	CER. 100NF +80-20% 50V
2408		4822 124 81151	ELECT 22μF 50V
2409		4822 124 81151	ELECT 22μF 50V
2410		4822 121 51387	FILM 10NF 20% 16V
2411		4822 121 51387	FILM 10NF 20% 16V
2412		4822 124 81151	ELECT 22μF 50V
2413		4822 121 51387	FILM 10NF 20% 16V
2414		4822 126 12882	CER. 100NF +80-20% 50V
2415		4822 124 81151	ELECT 22μF 50V
2416		4822 121 51387	FILM 10NF 20% 16V
2417		4822 121 51387	FILM 10NF 20% 16V
2425			
∫		4822 126 12882	CER. 100NF +80-20% 50V
2428			
			RESISTORS
3401		4822 052 10101	100R 5% 0.33W
3402		4822 116 52234	100K 5% 0.5W
3403			
∫		4822 050 21003	10K 1% 0.6W
3408			

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
3416			
∫		4822 116 83881	390R 5% 0.5W
3422			
3423			
∫		4822 116 52234	100K 5% 0.5W
3426			
3427			
∫		4822 050 21003	10K 1% 0.6W
3436			
3437		4822 116 52234	100K 5% 0.5W
3438		4822 116 52234	100K 5% 0.5W
3439		4822 116 52234	100K 5% 0.5W
3440		4822 116 83872	220R 5% 0.5W
3441		4822 116 52234	100K 5% 0.5W
3442		4822 050 23303	33K 1% 0.6W
3443		4822 116 52257	22K 5% 0.5W
3444		4822 116 52283	4K7 5% 0.5W
3445		4822 116 52256	2K2 5% 0.5W
3446		4822 116 52257	22K 5% 0.5W
3447		4822 116 52175	100E 5% 0.5W
3448			
∫		4822 050 21003	10K 1% 0.6W
3451			
3452		4822 052 10101	100R 5% 0.33W
3453			
∫		4822 050 21003	10K 1% 0.6W
3459			
3460		4822 116 52257	22K 5% 0.5W
3461		4822 050 21003	10K 1% 0.6W
3462		4822 116 83884	47K 5% 0.5W
3463		4822 050 21003	10K 1% 0.6W
3464		4822 050 21003	10K 1% 0.6W
3465		4822 116 52257	22K 5% 0.5W
3466		4822 116 52195	47E 5% 0.5W
3467		4822 052 10101	100R 5% 0.33W
3468			
∫		4822 050 21003	10K 1% 0.6W
3488			
3489		4822 116 83884	47K 5% 0.5W
3490		4822 050 21003	10K 1% 0.6W
3491		4822 116 83884	47K 5% 0.5W
3492		4822 050 21003	10K 1% 0.6W
3493		4822 116 83884	47K 5% 0.5W
3494		4822 050 21003	10K 1% 0.6W
3495		4822 116 83872	220R 5% 0.5W
3496		4822 116 52256	2K2 5% 0.5W
3541	PM8000	4822 053 10332	3K30 5% 1W
3542		4822 050 21003	10K 1% 0.6W
3543		4822 116 83881	390R 5% 0.5W
3544		4822 050 21003	10K 1% 0.6W
3545		4822 116 83881	390R 5% 0.5W
3546		4822 050 21003	10K 1% 0.6W
3547		4822 050 21003	10K 1% 0.6W
			SEMICONDUCTORS
6401			
∫		4822 130 30621	DIODE 1N4148
6404			
6405		4822 130 34174	DIODE BZX79-B4V7
6406			
∫		4822 130 82978	LED HTL-16KPE-P
6413			
6414	PM8000	4822 130 82978	LED HTL-16KPE-P
6415		4822 130 82978	LED HTL-16KPE-P
6416		4822 130 82978	LED HTL-16KPE-P
6417		4822 130 30621	DIODE 1N4148
6418		4822 130 30621	DIODE 1N4148
7401		4822 209 15719	IC MP47C200BN
7402		4822 209 30193	IC B1641

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
7404		4822 130 40959	TRS. BC547B
7405		4822 130 40959	TRS. BC547B
7406		4822 130 40959	TRS. BC547B
7407		4822 130 44568	TRS. BC557B
7408		4822 130 40959	TRS. BC547B
7409			
∫		4822 130 44568	TRS. BC557B
7412			
7413		4822 130 40959	TRS. BC547B
7414		4822 130 40959	TRS. BC547B
7415		4822 130 44568	TRS. BC557B
7416		4822 130 40959	TRS. BC547B
7417		4822 130 44568	TRS. BC557B
7418		4822 130 40959	TRS. BC547B
7419		4822 130 44568	TRS. BC557B
7420		4822 130 40959	TRS. BC547B
7421		4822 130 44568	TRS. BC557B
7422		4822 130 40959	TRS. BC547B
7423		4822 130 44568	TRS. BC557B
7424		4822 130 40959	TRS. BC547B
7425		4822 130 44568	TRS. BC557B
7426		4822 130 40959	TRS. BC547B
7427		4822 130 44568	TRS. BC557B
7428			
∫		4822 130 40959	TRS. BC547B
7431			
7432		4822 130 44568	TRS. BC557B
7433		4822 130 44568	TRS. BC557B
7434		4822 130 40959	TRS. BC547B
			MISCELLANEOUS
1401		4822 276 13114	SWITCH, PUSH BUTTON
1402		4822 276 13114	SWITCH, PUSH BUTTON
1403		4822 273 10336	SWITCH, ROTARY
			SRBV14-F1620-11
1407		4822 267 51322	CONNECTOR, 15P
5400		4822 242 72527	FILTER, CERAMIC
			CST4.00MGW-TF01
5401		4822 157 50963	COIL 2.2μH
7403		4822 130 10165	REMOTE RECEIVER GP1U28XP
			ENCODER CIRCUIT BOARD
3497		4822 116 52175	RES. 100E 5% 0.5W
3498		4822 116 52175	RES. 100E 5% 0.5W
1404		4822 273 10237	SWITCH, ROTARY
			SRRS1C(G79424930)
			TONE CIRCUIT BOARD
			CAPACITORS
2201		4822 122 30043	CER. 10NF 80% 63V
2202		4822 122 30043	CER. 10NF 80% 63V
2203		4822 124 12025	ELECT 470μF 20% 35V
2204		4822 124 41329	ELECT 2200μF 20% 35V
2205		4822 124 12022	ELECT 220μF 20% 25V
2206		4822 124 12022	ELECT 220μF 20% 25V
2207		4822 124 12025	ELECT 470μF 20% 35V
2208		4822 124 40257	ELECT 220μF 20% 63V
2209		4822 124 12025	ELECT 470μF 20% 35V
2210		4822 124 12025	ELECT 470μF 20% 35V
2211	N	4822 122 30103	CER. 22NF 80% 63V
2501		4822 124 81151	ELECT 22μF 50V
2502		4822 124 81151	ELECT 22μF 50V
2503		4822 122 33849	CER. 150pF 10% 50V
2504		4822 122 33849	CER. 150pF 10% 50V
2505		4822 124 12022	ELECT 220μF 20% 25V
2506		4822 124 12022	ELECT 220μF 20% 25V
2507		4822 121 41857	FILM 10NF 5% 250V
2508		4822 121 41857	FILM 10NF 5% 250V

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
2509		4822 122 33293	CER. 100pF 5% 50V
2510		4822 122 33293	CER. 100pF 5% 50V
2511		4822 124 40769	ELECT 4.7μF 20% 100V
2512		4822 124 40769	ELECT 4.7μF 20% 100V
2513		4822 121 51399	FILM 47NF 10% 50V
2514		4822 121 51399	FILM 47NF 10% 50V
2515		4822 124 12022	ELECT 220μF 20% 25V
2516		4822 124 12022	ELECT 220μF 20% 25V
2517		4822 124 40763	ELECT 2.2μF 100 V
2518		4822 124 40763	ELECT 2.2μF 100 V
2519		4822 121 10686	FILM 4.7NF 10% 50V
2520		4822 121 10686	FILM 4.7NF 10% 50V
2535		4822 122 33195	CER. 100pF 10% 50V
2536		4822 122 33195	CER. 100pF 10% 50V
			RESISTORS
⚠ 3203		4822 052 10479	47R 5% 0.33W
3501			
∫		4822 116 83866	1M 5% 0.5W
3504			
3505		4822 116 83874	220K 5% 0.5W
3506		4822 116 83874	220K 5% 0.5W
3507		4822 116 83872	220R 5% 0.5W
3508		4822 116 83872	220R 5% 0.5W
3509		4822 116 52269	3K3 5% 0.5W
3510		4822 116 52269	3K3 5% 0.5W
3511		4822 101 11788	VARIAB. 10K X2 20% 0.05W
3512		4822 101 11788	VARIAB. 10K X2 20% 0.05W
⚠ 3513		4822 052 10479	47R 5% 0.33W
⚠ 3514		4822 052 10479	47R 5% 0.33W
3515		4822 116 52207	1K2 5% 0.5W
3516		4822 116 52207	1K2 5% 0.5W
3517		4822 116 52291	56K 5% 0.5W
3518		4822 116 52291	56K 5% 0.5W
3519		4822 116 52207	1K2 5% 0.5W
3520		4822 116 52207	1K2 5% 0.5W
3521		4822 116 52291	56K 5% 0.5W
3522		4822 116 52291	56K 5% 0.5W
3523		4822 052 10479	47R 5% 0.33W
⚠ 3524		4822 052 10479	47R 5% 0.33W
3525		4822 116 83872	220R 5% 0.5W
3526		4822 116 83872	220R 5% 0.5W
3527		4822 116 83874	220K 5% 0.5W
3528		4822 116 83874	220K 5% 0.5W
3529		4822 101 30828	VARIAB. 100K
3537		4822 116 52269	3K3 5% 0.5W
3538		4822 116 52269	3K3 5% 0.5W
3539		4822 116 52234	100K 5% 0.5W
3540		4822 116 52234	100K 5% 0.5W
			SEMICONDUCTORS
⚠ 6201		4822 130 31878	DIODE 1N4003G
⚠ 6202		4822 130 31878	DIODE 1N4003G
⚠ 6203		4822 130 31878	DIODE 1N4003G
⚠ 6204		4822 130 31878	DIODE 1N4003G
7201		5322 209 86361	IC MC7915CT
7202		5322 209 71759	IC MCT7815CT
7203		5322 130 44349	TRS. BC635
7501		4822 209 73064	IC NJM2068DD
7502		4822 209 73064	IC NJM2068DD
7503		4822 209 73064	IC NJM2068DD
			MISCELLANEOUS
⚠ 1201		4822 071 55001	FUSE 19372(500MA)
⚠ 1202		4822 071 55001	FUSE 19372(500MA)
1500		2422 128 02902	SWITCH, PUSH

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
			POWER CIRCUIT BOARD
			CAPACITORS
⚠ 2201		2020 558 90382	CER. CERSAF KC-F 250V S 10N PM20
⚠ 2202		2020 558 90382	CER. CERSAF KC-F 250V S 10N PM20
2204	U, F	5322 121 42498	CER. 680NF 5% 63V
2205		4822 124 12028	ELECT 12000µF 20% 63V
2206		4822 124 12028	ELECT 12000µF 20% 63V
2207	PM8000	4822 124 42391	ELECT 470µF 20% 63V
2208	PM8000	4822 124 42391	ELECT 470µF 20% 63V
2209		4822 121 51319	FILM 1µF 1% 63V
2210		4822 124 21913	ELECT 1µF 20% 63V
2211		4822 124 80141	CER. 10NF 10% 50V
2212		4822 124 80141	CER. 10NF 10% 50V
2214	U, F	5322 121 42498	CER. 680NF 5% 63V
2217	N	4822 121 51387	FILM 10NF 20% 16V
2302		4822 124 12022	ELECT 220µF 20% 25V
2304		4822 124 12056	ELECT 1000µF 20% 35V
2305		4822 124 40433	ELECT 47µF 20% 25V
2401		4822 126 12333	CER. 100NF 10% 25V
			RESISTORS
3204	U, F	4822 050 26808	6R8 1% 0.6W
⚠ 3207		4822 052 10108	1R 5% 0.33W
⚠ 3208		4822 052 10479	47R 5% 0.33W
⚠ 3209		4822 052 10479	47R 5% 0.33W
3210		4822 116 52234	100K 5% 0.5W
3211		4822 116 52234	100K 5% 0.5W
3217	PM8000	4822 053 10229	22R 5% 1W
3218	PM8000	4822 053 10229	22R 5% 1W
			SEMICONDUCTORS
6202		4822 130 30621	DIODE 1N4148
6204	PM8000	4822 130 30621	DIODE 1N4148
⚠ 6205		4822 130 10944	DIODE BRIDGE GBU6D
6206 ∫ 6209	PM8000	4822 130 31878	DIODE 1N4003G
⚠ 6210 ∫ ⚠ 6216		4822 130 31878	DIODE 1N4003G
6302		4822 130 30621	DIODE 1N4148
⚠ 7302		4822 209 80817	IC L7805CV
			MISCELLANEOUS
⚠ 1201		2422 128 02898	SWITCH, PUSH
⚠ 1205	N	4822 070 32502	FUSE 21802.5(2.5A)
⚠ 1206	N	4822 265 11009	MAINS OUTLET
⚠ 1206	U, F	4822 265 11081	MAINS OUTLET
⚠ 1209	N	4822 070 33152	FUSE 2183.15(3.15A)
⚠ 1209	U, F	4822 070 36302	FUSE 21806.3(6.3A)
⚠ 1213	PM8000	4822 071 54002	FUSE 19372(4A)
⚠ 1214	PM8000	4822 071 54002	FUSE 19372(4A)
⚠ 1215		4822 071 55001	FUSE 19372(500MA)
⚠ 1216	PM8000	4822 071 55001	FUSE 19372(500MA)
1401		4822 267 41009	CONNECTOR, CABLE/WIRE
⚠ 5202		4822 280 10337	RELAY VS-12MB-NR (1P-12V)
⚠ 5204	PM8000	4822 280 10344	RELAY LY2-0-DC24 B
⚠ 5205	N	4822 146 10828	TRANSFORMER
⚠ 5205	U, F	4822 146 10861	TRANSFORMER

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
			MAIN CIRCUIT BOARD
			CAPACITORS
2251		4822 124 12023	ELECT 47µF 20% 25V
2252		4822 124 12023	ELECT 47µF 20% 25V
2253		4822 122 33197	CER. 1NF 10% 50V
2254		4822 122 33197	CER. 1NF 10% 50V
2255		4822 124 12022	ELECT 220µF 20% 25V
2256		4822 124 12022	ELECT 220µF 20% 25V
2257	PM7000	4822 122 33519	CER. 470pF 10% 50V
2257	PM8000	4822 126 12339	CER. 2.2NF 10%
2258	PM7000	4822 122 33519	CER. 470pF 10% 50V
2258	PM8000	4822 126 12339	CER. 2.2NF 10%
2259	PM7000	4822 126 14164	CER. 10pF 5% 50V
2259	PM8000	4822 122 31822	CER. 4.7pF 10% 100V
2260	PM7000	4822 126 14164	CER. 10pF 5% 50V
2260	PM8000	4822 122 31822	CER. 4.7pF 10% 100V
2261	PM7000	4822 122 33519	CER. 470pF 10% 50V
2261	PM8000	4822 122 33197	CER. 1NF 10% 50V
2262	PM7000	4822 122 33519	CER. 470pF 10% 50V
2262	PM8000	4822 122 33197	CER. 1NF 10% 50V
2263	PM7000	2020 012 93547	ELECT 100µF 20% 63V
2263	PM8000	4822 124 40257	ELECT 220µF 20% 63V
2264	PM7000	2020 012 93547	ELECT 100µF 20% 63V
2264	PM8000	4822 124 40257	ELECT 220µF 20% 63V
2265	PM7000	2020 012 93547	ELECT 100µF 20% 63V
2265	PM8000	4822 124 40257	ELECT 220µF 20% 63V
2266	PM7000	2020 012 93547	ELECT 100µF 20% 63V
2266	PM8000	4822 124 40257	ELECT 220µF 20% 63V
2267		4822 124 12022	ELECT 220µF 20% 25V
2268		4822 124 12022	ELECT 220µF 20% 25V
2269 ∫ 2272		5322 121 42386	FILM 100NF 0.05 63V
2273 ∫ 2276	N	4822 124 80141	CER. 10NF 10% 50V
2283		4822 124 21913	ELECT 1µF 20% 63V
			RESISTORS
3251		4822 116 52176	10E 5% 0.5W
3252		4822 116 52176	10E 5% 0.5W
3253		4822 116 83874	220K 5% 0.5W
3254		4822 116 83874	220K 5% 0.5W
3255		4822 050 11002	1K00 1% 0.4W
3256		4822 050 11002	1K00 1% 0.4W
3257		4822 116 52264	27K 5% 0.5W
3258		4822 116 52264	27K 5% 0.5W
3259		4822 116 52213	180E 5% 0.5W
3260		4822 116 52213	180E 5% 0.5W
3261		4822 116 83872	220R 5% 0.5W
3262		4822 116 83872	220R 5% 0.5W
3263		4822 100 11213	VARIAB. 22K30% LIN 0.1W
3264		4822 100 11213	VARIAB. 22K30% LIN 0.1W
3265 ∫ 3270		4822 116 83872	220R 5% 0.5W
3271		4822 116 52243	1K5 5% 0.5W
3272		4822 116 52243	1K5 5% 0.5W
3273		4822 050 11002	1K00 1% 0.4W
3274		4822 050 11002	1K00 1% 0.4W
3275		4822 116 83884	47K 5% 0.5W
3276		4822 116 83884	47K 5% 0.5W
3277	PM7000	4822 116 83872	220R 5% 0.5W
3277	PM8000	4822 116 52228	680E 5% 0.5W
3278	PM7000	4822 116 83872	220R 5% 0.5W
3278	PM8000	4822 116 52228	680E 5% 0.5W
3279 ∫ 3284		4822 050 11002	1K 1% 0.4W

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
3285		4822 116 52264	27K 5% 0.5W
3286		4822 116 52264	27K 5% 0.5W
3287		4822 116 83868	150R 5% 0.5W
3288		4822 116 83868	150R 5% 0.5W
3289	PM7000	4822 116 83874	220K 5% 0.5W
3289	PM8000	4822 116 83884	47K 5% 0.5W
3290	PM7000	4822 116 83874	220K 5% 0.5W
3290	PM8000	4822 116 83884	47K 5% 0.5W
3291	PM7000	4822 116 83874	220K 5% 0.5W
3291	PM8000	4822 116 83884	47K 5% 0.5W
3292	PM7000	4822 116 83874	220K 5% 0.5W
3292	PM8000	4822 116 83884	47K 5% 0.5W
3293		4822 116 83868	150R 5% 0.5W
3294		4822 116 83868	150R 5% 0.5W
3295			
∫		4822 052 10109	10E 5% 0.33W
3298			
3299		4822 101 11787	VARIAB. 100R 30% 0.1W
3300		4822 101 11787	VARIAB. 100R 30% 0.1W
3301		4822 116 83876	270R 5% 0.5W
3302		4822 116 83876	270R 5% 0.5W
3303		4822 116 52207	1K2 5% 0.5W
3304		4822 116 52207	1K2 5% 0.5W
3305		4822 116 80176	1E 5% 0.5W
3306		4822 116 80176	1E 5% 0.5W
3309	PM8000	4822 100 20166	VARIAB. 10K 30% LIN 0.1W
3310	PM8000	4822 100 20166	VARIAB. 10K 30% LIN 0.1W
3311		4822 050 11002	1K 1% 0.4W
3312		4822 050 11002	1K 1% 0.4W
3313			
∫		4822 052 10101	100R 5% 0.33W
3316			
3317			
∫		4822 052 10681	680R 5% 0.33W
3320			
3321			
∫		4822 052 10479	47R 5% 0.33W
3324			
⚠ 3325		4822 052 10151	150R 5% 0.33W
⚠ 3326		4822 052 10151	150R 5% 0.33W
⚠ 3327			
∫		4822 052 10109	10R 5% 0.33W
⚠ 3334			
⚠ 3335			
∫		4822 116 82049	2 X R18 3W
⚠ 3338			
3339			
∫		4822 050 21002	1K 1% 0.6W
3342			
3343		4822 116 52257	22K 5% 0.5W
3344		4822 116 52257	22K 5% 0.5W
3345		4822 116 52289	5K6 5% 0.5W
3346		4822 116 52257	22K 5% 0.5W
3347	PM7000	4822 116 52297	68K 5% 0.5W
3347	PM8000	4822 116 83882	39K 5% 0.5W
3348		4822 116 52257	22K 5% 0.5W
3349		4822 116 52297	68K 5% 0.5W
3350		4822 116 52297	68K 5% 0.5W
3351		4822 052 10221	220R 5% 0.33W
3352		4822 052 10221	220R 5% 0.33W
3353		4822 053 12109	10R 5% 3W
3354		4822 053 12109	10R 5% 3W
3355		4822 053 11331	330R 5% 2W
3356		4822 053 11331	330R 5% 2W
3369	PM8000	4822 050 11002	1K 1% 0.4W
3370	PM8000	4822 050 11002	1K 1% 0.4W

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
			SEMICONDUCTORS
6251			
∫		4822 130 30621	DIODE 1N4148
6266			
6267			
∫		5322 130 34834	DIODE BZX79-C3V6
6270			
6271		4822 130 30621	DIODE 1N4148
6272		4822 130 30621	DIODE 1N4148
6273			
∫		4822 130 30842	DIODE BAV21
6278			
6279		4822 130 30621	DIODE 1N4148
6280		4822 130 30621	DIODE 1N4148
6281		4822 130 30621	DIODE 1N4148
7251			
∫		4822 130 43233	TRS. 2SC2240GR
7256			
7257			
∫		4822 130 42949	TRS. 2SA970GR
7260			
7261		4822 130 43233	TRS. 2SC2240GR
7262		4822 130 43233	TRS. 2SC2240GR
7263		4822 130 61009	TRS. 2SC3423(O)
7264		4822 130 61009	TRS. 2SC3423(O)
7265		5322 130 61728	TRS. 2SA1360-Y
7266		5322 130 61728	TRS. 2SA1360-Y
⚠ 7267		4822 130 60117	TRS. 2SC3419
⚠ 7268		4822 130 60117	TRS. 2SC3419
7269	PM8000	4822 130 90347	COUPLER /PHOTO PC817
7270	PM8000	4822 130 90347	COUPLER /PHOTO PC817
7271		4822 130 41646	TRS. BF423
7272		4822 130 41646	TRS. BF423
7273		4822 130 41782	TRS. BF422
7274		4822 130 41782	TRS. BF422
⚠ 7275		4822 130 63634	TRS. 2SA1837Y
⚠ 7276		4822 130 63634	TRS. 2SA1837Y
⚠ 7277		4822 130 10941	TRS. 2SC4793
⚠ 7278		4822 130 10941	TRS. 2SC4793
⚠ 7279	PM7000	4822 130 10942	TRS. 2SA1941
⚠ 7279	PM8000	4822 130 37279	TRS. 2SA1962
⚠ 7280	PM7000	4822 130 10942	TRS. 2SA1941
⚠ 7280	PM8000	4822 130 10983	TRS. 2SA1962
⚠ 7281	PM7000	4822 130 10943	TRS. 2SC5198
⚠ 7281	PM8000	4822 130 10984	TRS. 2SC5242
⚠ 7282	PM7000	4822 130 10943	TRS. 2SC5198
⚠ 7282	PM8000	4822 130 10984	TRS. 2SC5242
⚠ 7283	PM7000	4822 130 10942	TRS. 2SA1941
⚠ 7283	PM8000	4822 130 10983	TRS. 2SA1962
⚠ 7284	PM7000	4822 130 10942	TRS. 2SA1941
⚠ 7284	PM8000	4822 130 10983	TRS. 2SA1962
⚠ 7285	PM7000	4822 130 10943	TRS. 2SC5198
⚠ 7285	PM8000	4822 130 10984	TRS. 2SC5242
⚠ 7286	PM7000	4822 130 10943	TRS. 2SC5198
⚠ 7286	PM8000	4822 130 10984	TRS. 2SC5242
7287		4822 130 43233	TRS. 2SC2240GR
7288		4822 130 43233	TRS. 2SC2240GR
7289		4822 130 42949	TRS. 2SA970GR
			MISCELLANEOUS
1255		4822 265 11068	CONNECTOR,LOUDSPEAKER SOCKET LEFT
1256		4822 265 11069	CONNECTOR,LOUDSPEAKER SOCKET RIGHT
5268		4822 280 70354	RELAY VB-24MBU-510
5269		4822 280 70354	RELAY VB-24MBU-510
5270		4822 280 20501	RELAY MR62-24SR
5351		4822 157 70599	COIL
5352		4822 157 70599	COIL

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION
			SPK PROTECT CIRCUIT BOARD
			CAPACITORS
2277		4822 121 51387	FILM 10NF 20% 16V
2278		4822 124 40433	ELECT 47μF 20% 25V
2279		4822 124 40433	ELECT 47μF 20% 25V
2281		4822 124 21913	ELECT 1μF 20% 63V
2282		4822 124 40433	ELECT 47μF 20% 25V
			RESISTORS
3357		4822 116 83884	47K 5% 0.5W
3358		4822 053 10103	10K 5% 1W
3360		4822 116 83874	220K 5% 0.5W
3361		4822 050 23303	33K 1% 0.6W
3362		4822 116 52291	56K 5% 0.5W
3364		4822 053 10223	22K 5% 1W
3365		4822 116 52234	100K 5% 0.5W
			SEMICONDUCTOR
7290		4822 209 83312	IC TA7317P
			SPK SW CIRCUIT BOARD
			CAPACITORS
2533		4822 122 30043	CER. 10NF 80% 63V
2534		4822 122 30043	CER. 10NF 80% 63V
			RESISTORS
3530		4822 116 52256	2K2 5% 0.5W
3531		4822 116 52256	2K2 5% 0.5W
3532		4822 116 52257	22K 5% 0.5W
3533		4822 116 52176	10E 5% 0.5W
3534		4822 116 52176	10E 5% 0.5W
3535		4822 116 52234	100K 5% 0.5W
			SEMICONDUCTORS
6529		4822 130 30621	DIODE 1N4148
7529		4822 130 44283	TRS. BC636
7530		4822 130 44568	TRS. BC557B
			MISCELLANEOUS
1507		2422 128 02897	SWITCH UNIT
1510		4822 267 31453	CONNECTOR, HLJ1540

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION

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